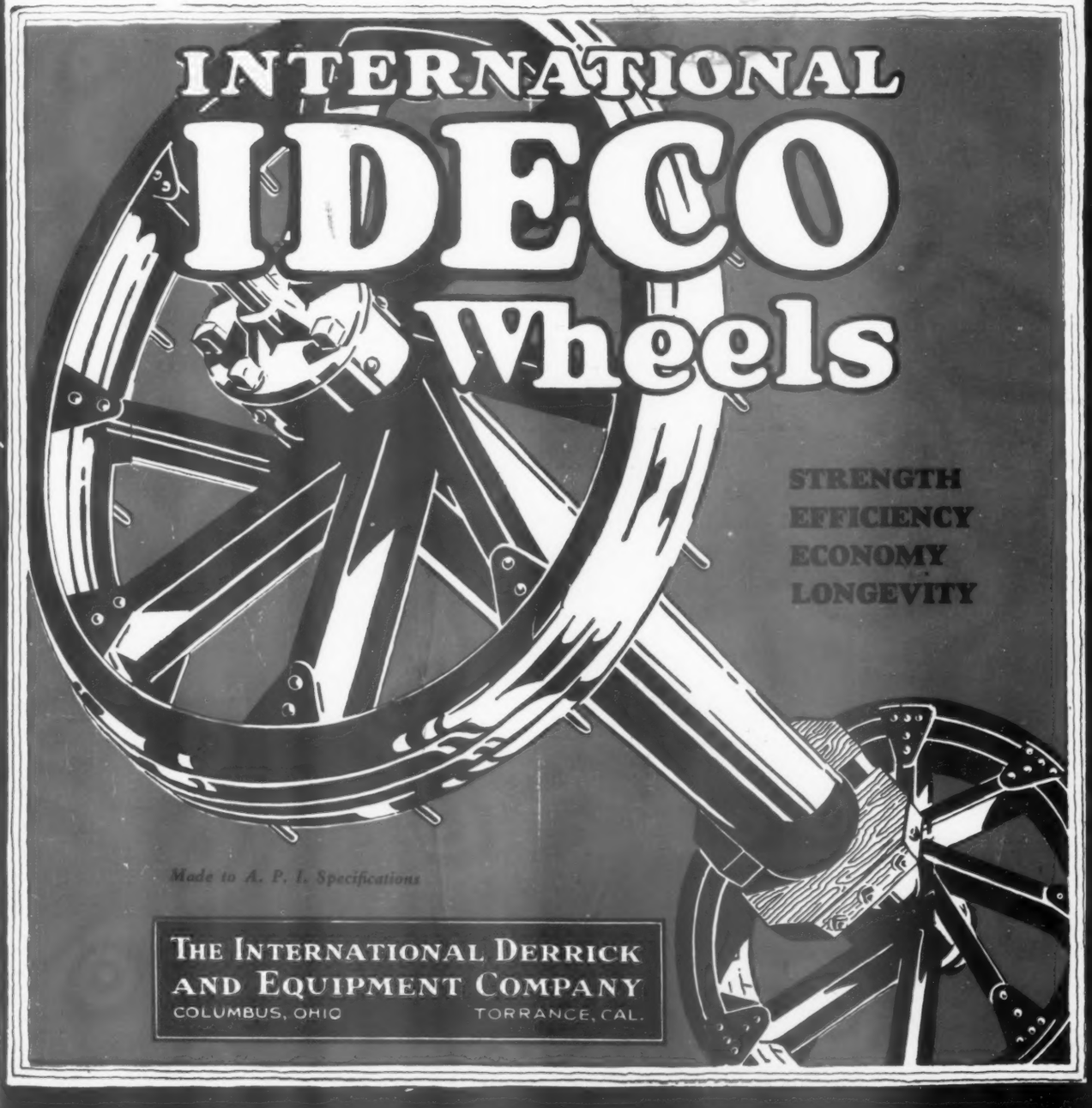
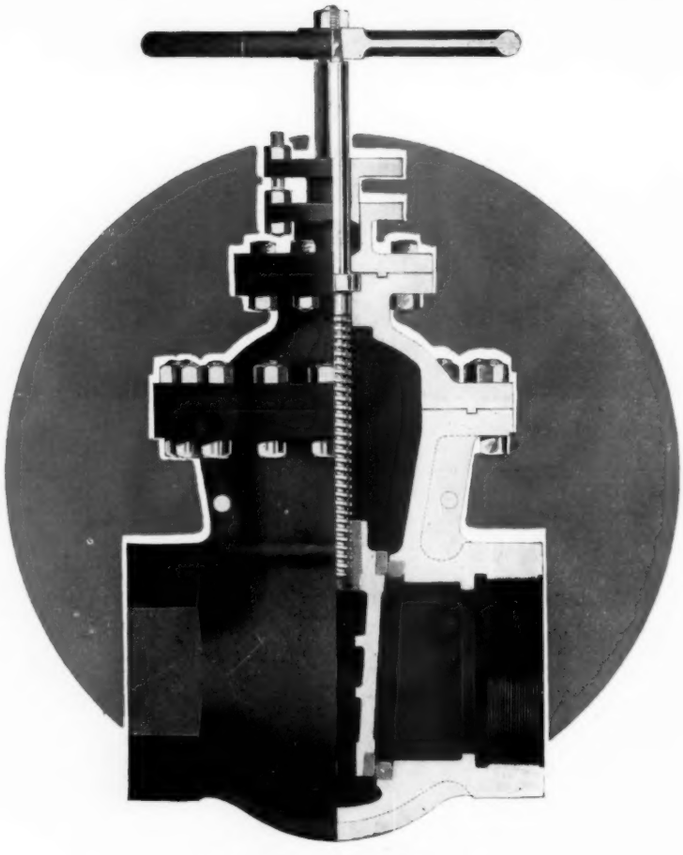
10¢ A COPY

The OIL WEEKLY

Exclusively Devoted To The Production and Transportation of Oil and Gas

August 17, 1928 Volume 50. No. 9





Kerotest Valves

THERE IS NO SUBSTITUTE FOR EXPERIENCE

NOTHING can substitute for the experience in the oil field supply business that Norvell Wilder has gained through seventeen years actual contact with the field man.

Such experience has enabled this firm to know the type of service demanded and to give that kind. Equipment must be carried in stock and delivery must be prompt.

Men who represent this company are men who know how to meet emergencies and who know how to advise you on yours. Though thought of purchase may be remote, let a Norvell Wilder man council with you.

Don't hesitate to take advantage of this experience and use it as your own. *It is sure to save you time and money.*

NORVELL WILDER HARD-WARE CO. QUALITY AND SERVICE

NORVELL WILDER HARDWARE CO.

BEAUMONT HOUSTON SHREVEPORT FT. WORTH

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

Leadership

The responsibilities of ruling one of the world's mightiest nations are exacting—but America has never failed in an emergency to produce a man particularly well fitted to pilot the ship past the danger zone.

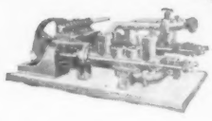
Leadership in the field of oil industry pumps also has its responsibilities. Changing conditions are constantly bringing about the need for new pumping equipment. GASO owes much of its success to the promptness and efficiency with which these needs have been met.

Our 64-page catalog is a handbook of pumping information. Shall we send you your copy?

GASO PUMP & BURNER MFG. COMPANY

Tulsa · Oklahoma

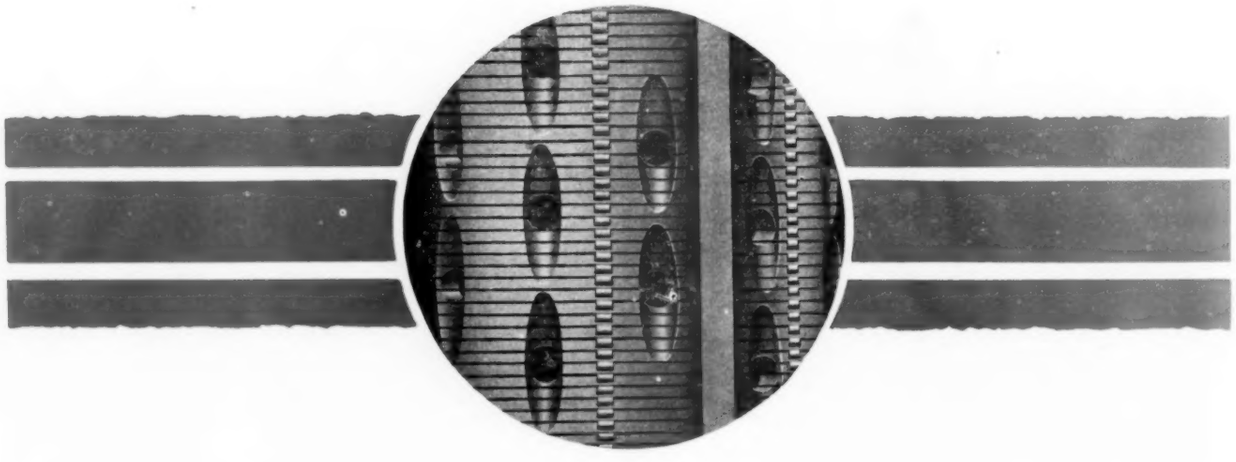
Gaso Model No. 1018 is an exceptionally popular suction pump for use in stations and in the field. It has a large capacity, is sturdily constructed, and offers amazing accessibility of parts.



Model No. 1012 is built especially for high-pressure duty. 130 to 204 gallons capacity against 700 to 900 pound pressures. It thrives on heavy work. For detailed information, ask any pipe-line operator!

GASO PUMPS
for every oil industry need

The LAYNE Screen Eliminates Sand Cutting, Jamming or Clogging



Other THE LAYNE Products

Lead Cone and Canvas Ratchet Packers
Swivels — Pin Packers
Screw-Off Packers
Setting Nipples
Lead Seals

Ten or twelve wraps of Keystone Wire pass over each Milled Groove (note above illustration) preventing excessive production over the hole and giving a uniform feed of the fluid through the outer openings of the screen. It is fed through the drilled holes from the entire surface of the screen, thereby avoiding the possibility of "sand cutting," which is caused by excessive velocity of fluid entering at any one point.

Milled Grooves are so spaced that the drainage distance between the Keystone Wires is very short, eliminating the possibility of openings becoming jammed or clogged with mud or sand.

Write or wire for complete information.

The Layne and Bowler Co.

Houston, Texas

The Layne New York Co.
30 Church St., New York

The Layne & Bowler Corp.
Los Angeles, Cal.

Vickers, Limited
London, England

Obligation

This is Halliburton's
What is Yours?

Halliburton has contributed more during the last eight years toward the science and art of cementing oil wells than was contributed all time prior to 1920, and Halliburton's obligation to the industry demands constant improvement of organization, service, equipment and methods.

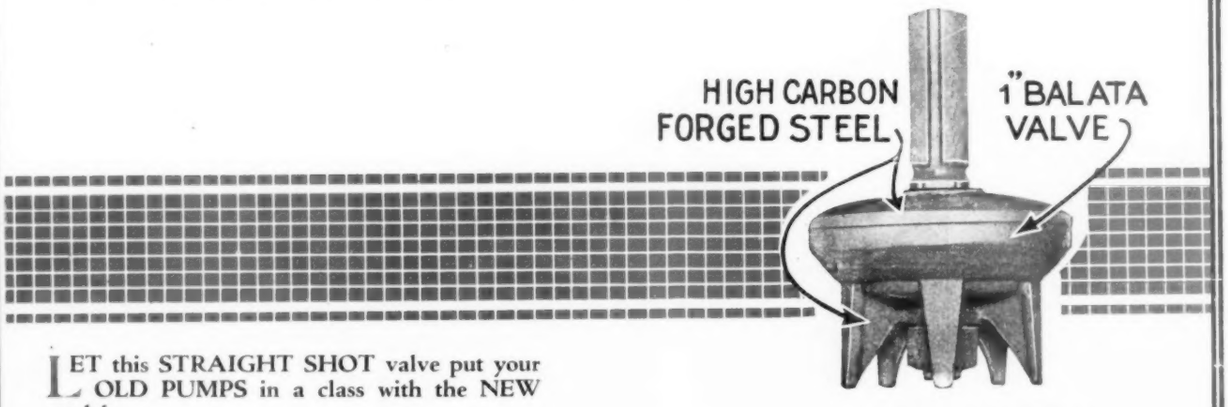
In good times and in bad, in flush fields and slack fields, Halliburton furnishes the same reliable service. Isn't it fair and good business to take the same advantage of this service in established fields and in boom fields alike? It is easy to find a price cutter in a boom field, but price cutting and dependability simply do not go together. To encourage one is to discourage the other. Every operator owes it to himself and to his industry to deal only with companies of unquestionable ability, reliability and integrity.

HALLIBURTON
OIL WELL CEMENTING COMPANY
DUNCAN, OKLAHOMA

Say you saw it in The OIL WEEKLY

SECO

STRAIGHT SHOT VALVE



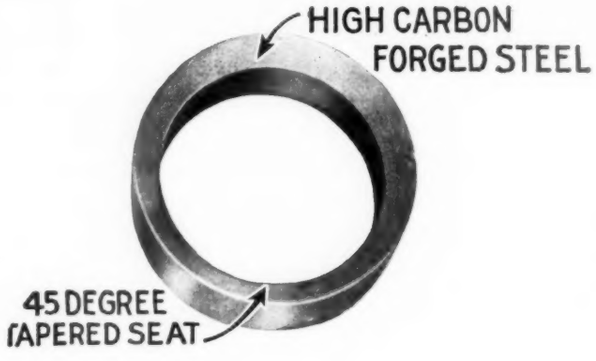
LET this STRAIGHT SHOT valve put your OLD PUMPS in a class with the NEW models.

This taper seated valve has been thoroughly tested and adopted by all pump manufacturers in later designed pumps.

Give your old pumps the same advantages as these new pumps. The MISSION Sales Company manufacture this NEW type Valve for 6¾" OLD Style pumps.

Made of DROP FORGED STEEL throughout, with 1" Balata Insert.

SOLD TO YOU AT A COST NO GREATER than for the old style, flat-seated cast iron type.



ASK FOR THE SECO VALVE AT YOUR SUPPLY STORE

or

Write us for complete information

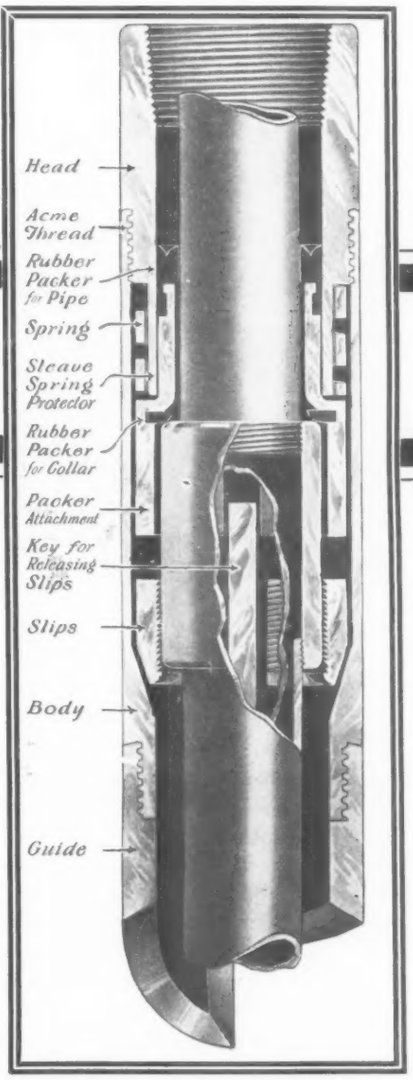
MISSION

Sales Company, Inc.,

Esperson Bldg.

HOUSTON

There's No Guesswork
when you use the NEW
LeBUS Overshot



Write for Catalogue!

—Fine wickered SLIPS

—with LEFT-HAND threading

—and ONE-INCH pitch to the revolution

—Operate on TWO KEYS

—and give INSTANT, POSITIVE RELEASE when rotated to the right.

also

—Steel packer with rubber inserts makes PERFECT JOINT that cannot be fouled by hard rotating.

LE BUS PATENTED OIL WELL TOOLS

LeBUS Automatic Cathead
LeBUS Slipsocket Overshot
LeBUS Eureka Tongs
LeBUS Breakdown Post
LeBUS Bottom Hole Plug
LeBUS Outside Drill Pipe Cutter
LeBUS Inside Pipe or Casing Cutter

AT YOUR DEALERS

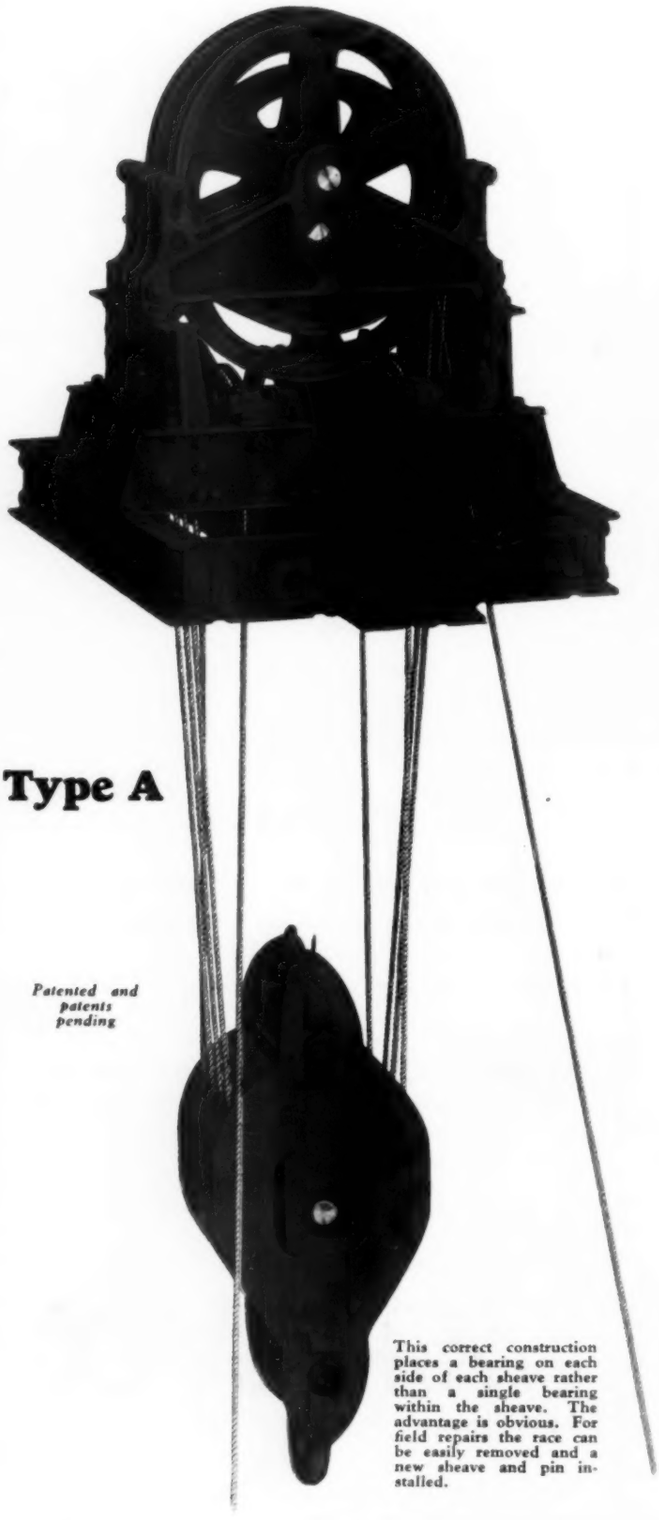
MANUFACTURED BY THE

LE BUS ROTARY TOOL WORKS

ELECTRA, TEXAS

Export Agents, Acme Well Supply Co., Inc., 136 Liberty Street, New York City, N. Y.

2 Bearings better than 1

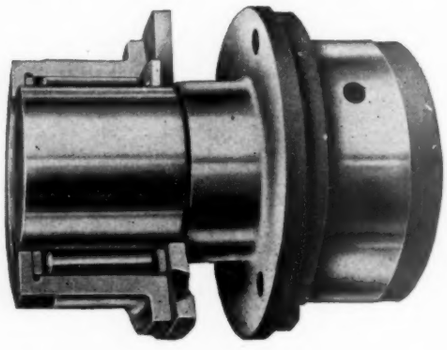


Type A

Patented and patents pending

This correct construction places a bearing on each side of each sheave rather than a single bearing within the sheave. The advantage is obvious. For field repairs the race can be easily removed and a new sheave and pin installed.

Special Double anti-friction Bearings for each sheave in Regan Traveling and Crown Blocks



Special Alloy steel made to our specifications, forged in our shops solely for sheave service, is used in constructing Regan anti-friction bearings. After machining, heat treating and grinding, each part is critically inspected and tested for hardness.

The pin is constructed with one flange which is integral with the pin. The pin is pressed through the sheave hydraulically after which a loose flange is placed on the opposite side and the entire assembly is riveted into one unit. The race rings are placed in the side plates with a light press fit and a dowel is inserted to lock them in place.

Regan
Forge & Engineering Co.
San Pedro California

Dallas, Texas
1504 Magnolia Bldg.

Pecos, Texas
P. O. Box 444

New York City
75 West St.
Wm. Braat, Manager

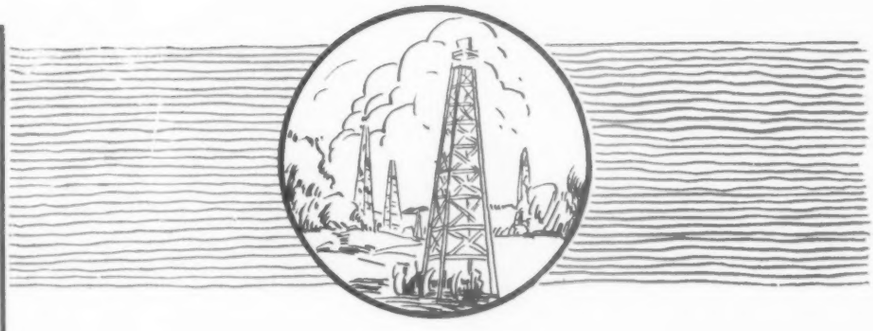
Maricaibo, Venezuela
Wm. Adams, c/o Amer. Consul

Say you saw it in The OIL WEEKLY

Complete Stocks

Supplies Carried in all T. T. Word Supply Stores

- Baldwin Chain
- Cameron Iron Works
- Dunn Tubing Stops
- Guiberson Tubing Catchers
- Wilson Tongs and Elevators
- Regan Equipment
- Garco Brake Band Lagging
- Wickwire Spencer Wire Lines
- A. H. Neilson Hooks—Elevators
- A. H. Neilson Rod Sockets
- Lion Paw Belting
- Lucey Drilling Equipment
- McClatchie Automatic Catheads
- McClatchie Cement Heads
- Armco Tubing
- Hughes Tool Company Products
- Reed Roller Bit Company Products
- Texas Iron Works Products
- Turbolite Generators
- Hindman Sub-Swivels
- W. K. M. Products



of standard equipment for every phase of drilling

The comprehensive list of supplies, shown on the left, is indicative of the service we can render you.

Notice the presence of practically every known, standard brand of equipment—the great diversity of supplies, and the completeness of stocks to cover every phase of drilling.

Whatever supplies you need—whatever brand you prefer—whenever and wherever you want it, you can rely upon T. T. Word to supply it, promptly and correctly.

Send us your orders

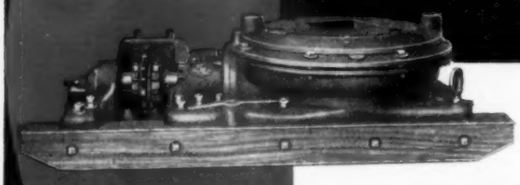
"KNOWLEDGE"

T. T. WORD SUPPLY CO.

OF OIL FIELD PROBLEMS AND EQUIPMENT

HOUSTON, TEX. SHREVEPORT, LOUISIANA. LAKE CHARLES LA.

TITUSVILLE ROTARY OUTFITS



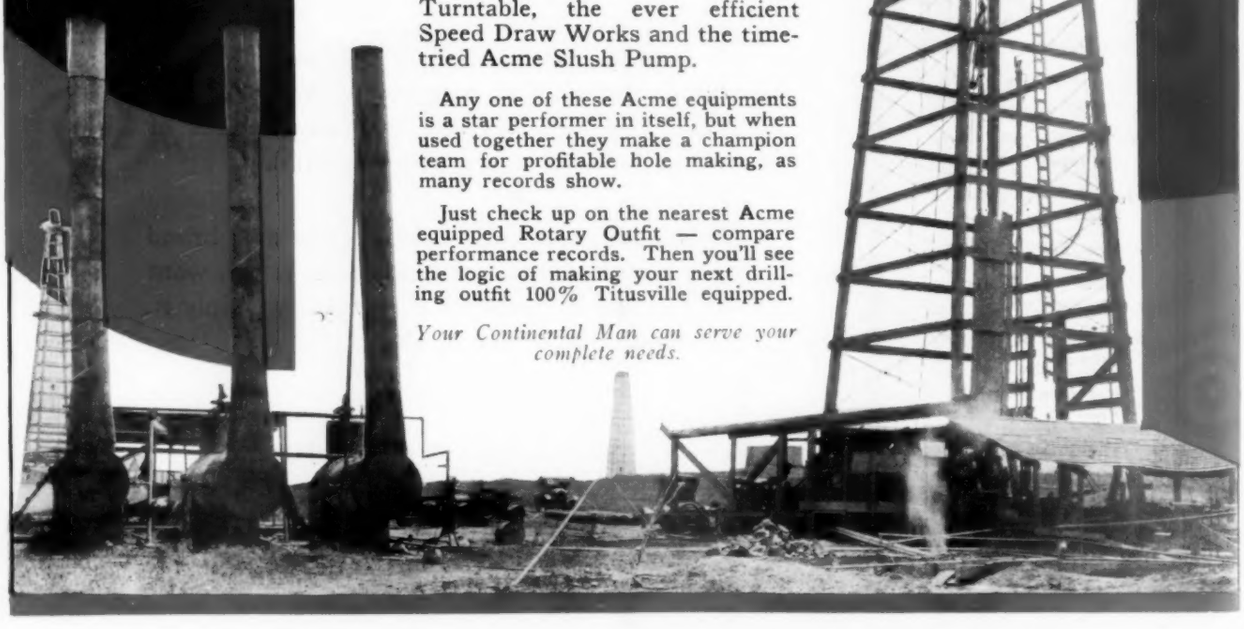
For 100% Satisfaction Make Your Drilling Outfit 100% Acme Equipped

Many of the best drilling records in the oil fields have been made by completely equipped Acme Rotary Rigs including the well constructed Titusville Boiler, the smooth and powerful Titusville Twin Cylinder Engine, the ever dependable Acme Rotary Turntable, the ever efficient Speed Draw Works and the time-tried Acme Slush Pump.

Any one of these Acme equipments is a star performer in itself, but when used together they make a champion team for profitable hole making, as many records show.

Just check up on the nearest Acme equipped Rotary Outfit — compare performance records. Then you'll see the logic of making your next drilling outfit 100% Titusville equipped.

Your Continental Man can serve your complete needs.



The TITUSVILLE IRON WORKS Co.
TITUSVILLE - PENNA.

DISTRIBUTORS

The CONTINENTAL SUPPLY COMPANY

Titusville Acme Boilers Single and Twin Steam Drilling Engines Tico Gas Engines Band Wheel and Geared Powers

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72-76 Trinity Court,
New York City, N. Y.

TITUSVILLE IRON WORKS CO. MACHINERY RUGGED - ENDURING

For California
CALIFORNIA MACHINERY SUPPLY CO.
615 Roosevelt Bldg.,
Los Angeles, Calif.

Titusville Acme Rotaries Acme Swivels and Speed Draw Works High Pressure Boilers Crown Blocks Slush Pumps

The deepest well in the Long Beach field is capped with Kerotests

KEROTEST

After an oil operator has spent thousands of good "iron men" to reach the pay sand, what could be a greater tribute to his good judgment than to cap his well with Kerotest Valves and Fittings—certified for strength—proved by severe laboratory tests to stand the highest pressure encountered in any oil field.

Above you see a Kerotest well setting capping the deepest well to date, at Long Beach, California.

Why not join the world-wide legion of Kerotest users? Remember you take no chance with a Kerotest—Every one is certified by the Pittsburgh Testing Laboratory.

KEROTEST

KEROTEST MANUFACTURING COMPANY
Pittsburgh, Penna.

Carried in Stock and Sold by
GRINNELL CO. OF THE PACIFIC
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Pittsburgh, New York, Tampico, London
Manufacturers of Drilling Valves, Refinery Valves, Flow Line Valves and Heavy Duty Fittings for Oil Fields

Don't Gamble with TEMPERATURE!

Insure Your Production

EVERY DAY OF THE YEAR. Desert heat or sub-zero!—its' all the same to RUMELY OILPULL OIL COOLED EQUIPMENT. OILPULL OIL COOLED equipment CANNOT FREEZE, CANNOT OVERHEAT, CANNOT CLOG or LIME your engine blocks, RUST or ROT OUT water lines or circulating tanks, which are the curse of internal combustion engines.

Rumely OilPull Winch Tractors and Stationary Engines are used wherever power is needed.

Every OilPull Winch Tractor that has ever been sold is STILL WORKING

Write today for information to

FRED E. COOPER

Special Representative and Developer of Oil Field Machinery

Phone 8904 **18 SOUTH MADISON** *Phone 8904*

TULSA, OKLAHOMA

"After Drilling 9860 Feet the- CLARK DRILLING ENGINE Needed Only a Couple of New Rings"

G. H. Johnson, V. P. and Gen. Mgr. Hucony Gas Company, Inc. (In background) Hucony-Tiner well, the discovery well in the new extension of the Noodle Creek Field, Jones Co., Texas.

ED S. HUGHES Pres. G. H. JOHNSON, Vice Pres. & Mgr. ARTHUR PRINCE, Sec. Treas.

HUCONY GAS COMPANY INC.

BOX 147 TELEPHONE 286

SWEETWATER, TEXAS

June 23rd, 1928.

Mr. Jack O'Conner,
Manager, Clark Brothers Co.,
Sweetwater, Texas.

Dear Sir:

Pursuant to our recent conversation regarding the use of our Clark Drilling Engine, we are glad to furnish you with the following information.

We purchased a Clark engine in December, 1926 from Clark Brothers Warehouse in Sweetwater, Texas. Moving same to the Marland-Hodge #1 in Fisher County. This well was completed at 3987 feet in 94 drilling days time. Moved same to the Winemiller-Arledge #1 in Nolan County. Completed this well at 3331 feet in 64 days drilling time. Moved this engine from Winemiller-Arledge well in Nolan Co. to Hucony Gas Co-Tiner #1, Jones County, completed this well at 2642 feet in 40 days drilling time. Then moved this engine from the Hucony Gas Co-Tiner #1 to the Snowden-McSweeney Beckley #1, Jones County and are now drilling at a depth of 400 feet.

Up to date, we have drilled some 10,000 feet of hole with this machine. Your service man, "Scotty" MacNeill, made an inspection of the engine just before we started the Snowden-McSweeney well and found that it was only necessary to put in two new rings. We have been out practically no expense at all on up keep expense on this engine in over 10,000 feet of hole and it was due to the exceptional service given on this engine that we decided to place another Clark engine on our test well in Sterling County, Texas.

Thanking you for the very good service given by your McCamey and Sweetwater warehouses and your service men, we are

Yours very truly,

HUCONY GAS COMPANY,
By G. H. Johnson

GHJ/ar

For impressive facts regarding the construction and performance of the CLARK Drilling Engine, address,

CLARK BROS. COMPANY
Olean, N. Y.

Branches and Warehouses 125 W. First St., Tulsa; McCamey and Sweetwater, Texas, and Artesia, N. M.
California: Smith, Booth, Usher Co., 228 S. Central Ave., Los Angeles, and 50 Freemont St., San Francisco

CLARK

Patented Oct. 6, 1925—Other Patents Pending

Patented Oct. 6, 1925—Other Patents Pending

For Real Endurance

SPECIFY SPANG—the *only* Weldless Drilling Jar—the *only* jar forged from a single billet of special high quality alloy steel—the *only* jar with a proved record of outwearing any other jars made—the *only* weldless drilling jar sold in over 300 supply houses throughout the petroleum world.

SPANG AND COMPANY

BUTLER, PENNSYLVANIA

Sold by all leading Supply Houses

Patented Oct. 6, 1925—Other Patents Pending

Patented Oct. 6, 1925—Other Patents Pending

DEFENDER *of Investments*

The thick, "armor plate" of toxic, chemically resistant, creosote-impregnated sap wood which surrounds the heart wood of "Black Beauty" Poles and Cross Arms is resistant to the attack of all enemies of poles—fungus growths, termites, acid soils, moisture, grass fires, etc. And the fact that the great natural strength of these select Southern Pine Poles (which repeated tests at the Forest Products Laboratory have shown to be greater than any other wood commercially available for poles) is practically undiminished, year after year, is the reason for their proved, well-known, exceedingly high resistance to wind and sleet storms.

Their high resistance to all destructive agents; their freedom, for a generation or more, from need for any attention whatever after installation; their proved economy—effective through preventing expensive service interruptions and material and labor losses from pole failures; and their low annual cost (lower than any species of untreated poles) make "Black Beauty" Poles and Cross Arms dependable aids in the fight to eliminate waste, lower costs, and at the same time better-safeguard investments.

TEXAS CREOSOTING COMPANY

Main Office and Plant: Orange, Texas, U. S. A.

Sales Representatives

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TULSA, OKLA.
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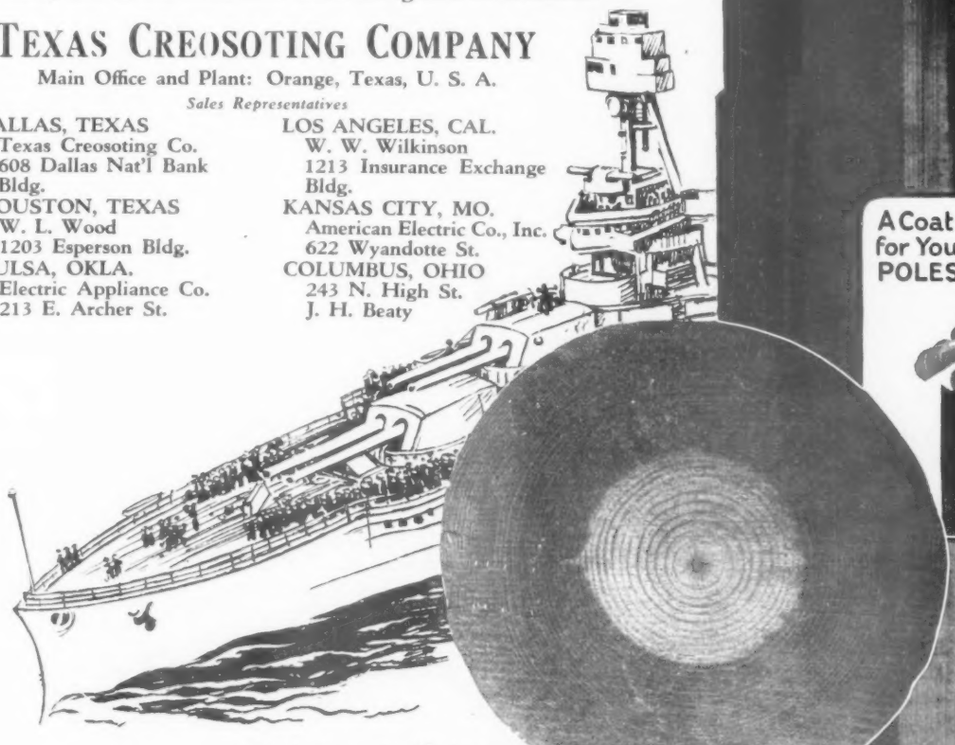

Reproductions to the right from untouched photographs. They show a vertical and a cross-section of a "Black Beauty" Pole. Note deep and uniform penetration---all the way to the heart wood---and the assured protection of areas around gain, bolt hole, and roof. Framing is done BEFORE *treating.*

"BLACK BEAUTY" POLES

The Split liner is an exclusive feature

The **PERFECTION** *Core Barrel*

If you could reach to the bottom of the hole, you could not hand cut a sample of the formation as clean and accurate as the Perfection Core.

Exclusive patented features compel this barrel to take only CLEAN cores that come out UNBROKEN. Simple construction of the best grade Chrome Nickel Steel makes it always dependable.

Write for list of prominent users and catalog.

Distributors

Cutter Heads Exchanged by Any Distributor

WILSON SUPPLY COMPANY, *Houston, Texas*
WILSON SUPPLY COMPANY, *Beaumont, Texas*
HERCULES SUPPLY CO., *Dallas, Texas*
HERCULES SUPPLY CO., *Vernon, Texas*
HERCULES SUPPLY CO., *Pyote, Texas*
CONTINENTAL SUPPLY CO., *Duncan, Okla.*
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OKLAHOMA OFFICE: *2 East California Street, Oklahoma City*

Oil City Iron Works

SHREVEPORT, LA.

Exporters: Continental Well Supply Co., 74 Trinity Place, New York City

Do you remember the fable of the wise old Roman and the bundle of sticks? . . . Separately, the sticks were easily broken, but bound together they withstood the efforts of the strongest. By this simple illustration the wise old father drove home the fact to his sons that if they stood together as a single unit they were invincible, but divided they might fall.

----- *United we stand*

Coordinated and functioning as a unit, all of the Axelson Departments present a smooth-running, forward-looking Organization—trained with two thoughts in mind:

1st—to build the finest Pumps and Sucker Rods.

2nd—to give more service to customers than is expected.

The consistent growth of the Axelson Organization and the international acceptance of Axelson Products are a result of this united internal efficiency.

Axelson

PUMPS & SUCKER RODS

Axelson Machine Company

P. O. Box 337, Los Angeles
Tulsa, St. Louis, New York City

Mid-Continent and Eastern Distributors:
Frick-Reid Supply Corporation

Be Careful In The Selection Of Lubricants For Your Motorized Equipment

Passenger cars and trucks of different makes vary considerably in type and design.

Be sure that you understand: (1). The type of lubricating system used, which determines the method of feeding the oil. (2). The type of cooling system used, this factor having more or less effect on the operating temperatures of various parts of the motor.

The proper lubrication of motor equipment means not only the lubrication of the engine cylinders — but the complete lubrication of all of the moving parts of the motor. Much harm can result from the use of too heavy an oil in a pressure system not designed to handle it—also where the "splash" system is used, the oil must not only flow easily, but must atomize readily so as to reach certain bearings which can be lubricated only by a fine mist. Your passenger cars and your trucks are designed to give you many years of service—if they are properly lubricated.

HUMBLE OIL & REFINING CO.
HUMBLE OILS
HOUSTON, TEXAS

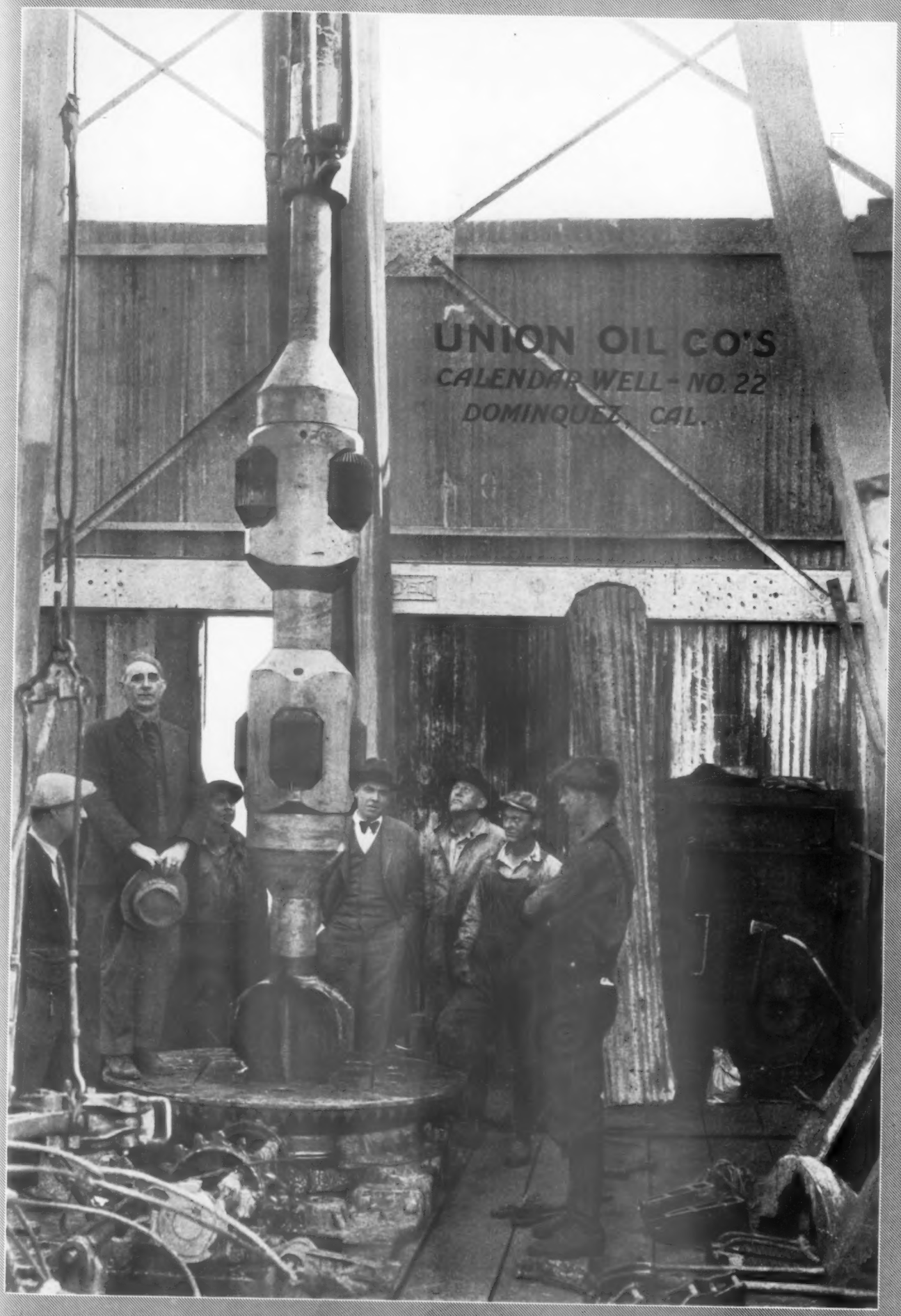
Reg. U. S. Pat. Off.

There is a Humble Oil which is specially prepared to meet every bearing need in your plant, your trucks, or in your automobile.

Humble Motor Oils are the result of years of experience in lubricating internal combustion engines. The recommendations of Humble engineers are an added factor of safety. Whether you operate one passenger car and truck, or a whole fleet of motorized equipment, it will pay you to learn more about Humble Oils.

Humble Oil & Refining Co.

Producers ~ Pipe Lines ~ Refiners ~ Marketers


UNION OIL CO'S
CALENDAR WELL - NO. 22
DOMINQUEZ, CAL.

IN REPLY GIVE NO

Union Oil Company of California

PRODUCERS AND REFINERS OF
CRUDE OIL. FUEL OIL. ROAD OIL AND ASPHALT.
UNION GASOLINE, KEROSENE AND DISTILLATE.
'RED LINE' LUBRICATING OILS AND GREASES.

P. O. Drawer F,
Compton, California,
May 24th, 1928.

Reed Roller Bit Company,
1317 Esperanza St.,
Los Angeles, California.

Gentlemen:-

We have been using the 17" and the 26" double, three point Reed Roller Reamers for the past year and have found them to be very satisfactory.

The 17" has reamed 6800-feet of hole with six sets of rollers and in every instance the pipe has followed freely and without difficulties. The 26" has reamed 3600-feet and the pipe has in every case followed freely.

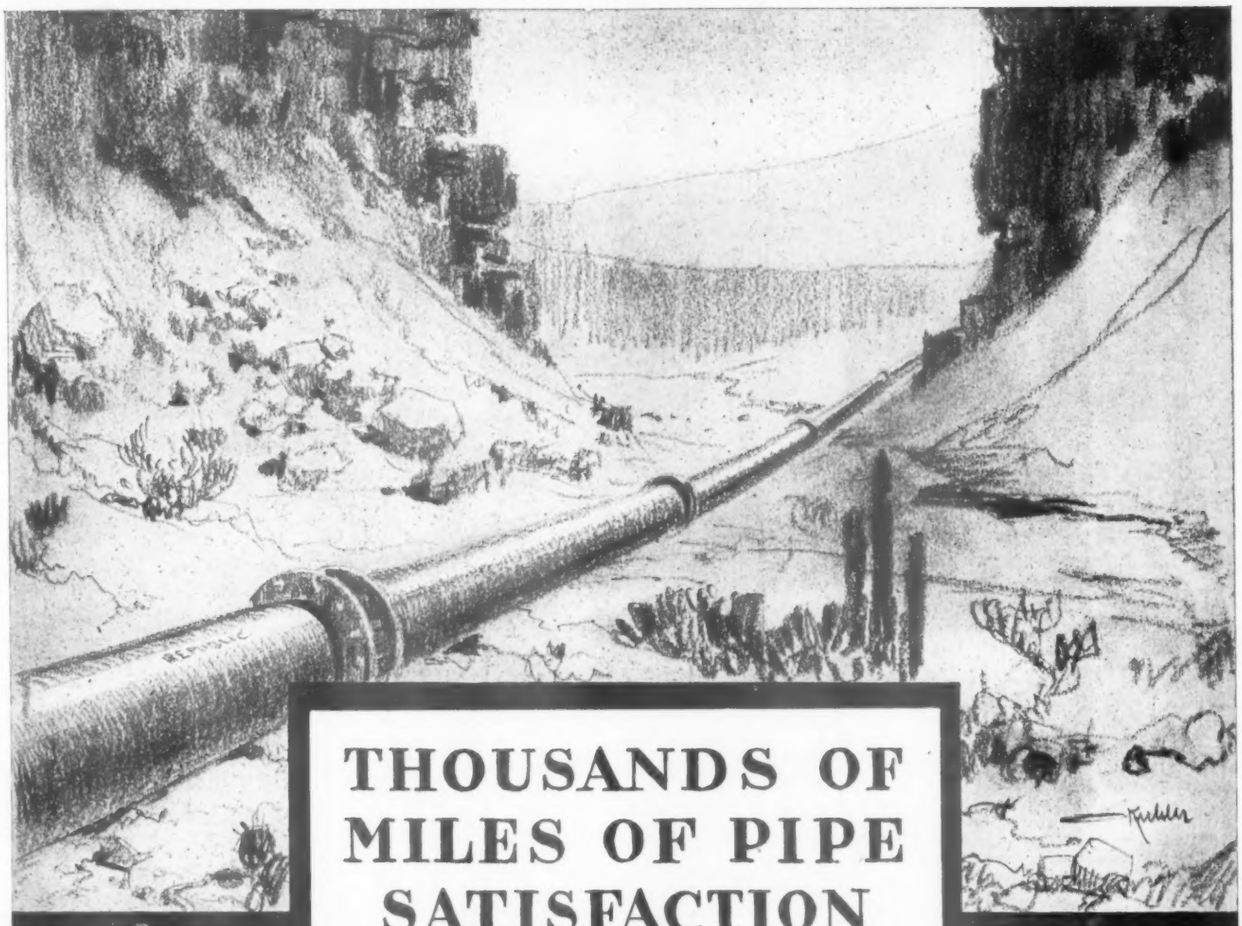
No twist-offs have occurred in any of these operations and we have been able to ream our holes completely in much less time that with any other tool which we have used.

Yours very truly,

M. L. Bowser

M. L. BOWSER,
Drilling Superintendent.

M.



THOUSANDS OF MILES OF PIPE SATISFACTION

EXPOSED and subjected to the rigors of daily service . . . the pull of the pump, the destructive influences of weather and other unusual outside conditions . . . Republic Pipe remains unscathed, dependable.

Republic Steel Pipe is serving the Oil and Gas fields unfailingly and enduringly . . . a tubular transportation system for the earth's valuable fluids.

Protector, as well as carrier from county to county, across the states, delivering safely from well to tank, from tank to refinery, year after year.

You can measure pipe-line satisfaction in terms of Republic Pipe.

PRODUCTS

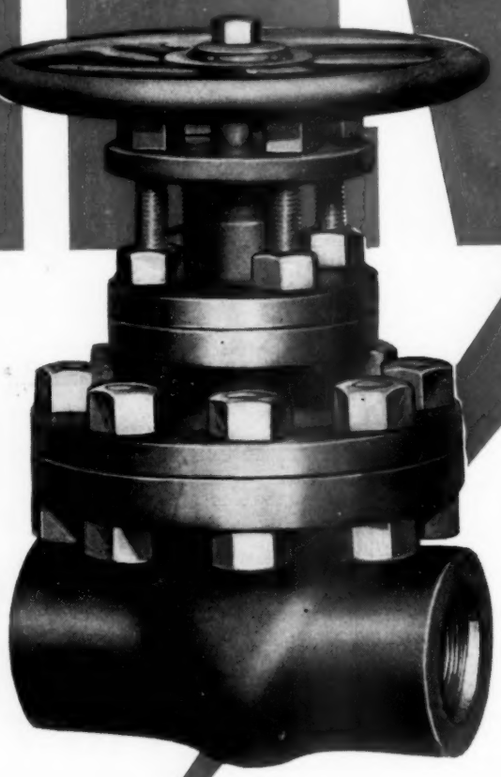
Tubing
Casing
Line, Rotary
and Drill Pipe

Branch Offices

Birmingham	Denver
Boston	Detroit
Buffalo	El Paso
Chicago	New York
Cincinnati	Philadelphia
Cleveland	Pittsburgh
Dallas	San Francisco
	St. Louis

REPUBLIC
IRON & STEEL CO. YOUNGSTOWN O.
PIPE & CASING

NEW



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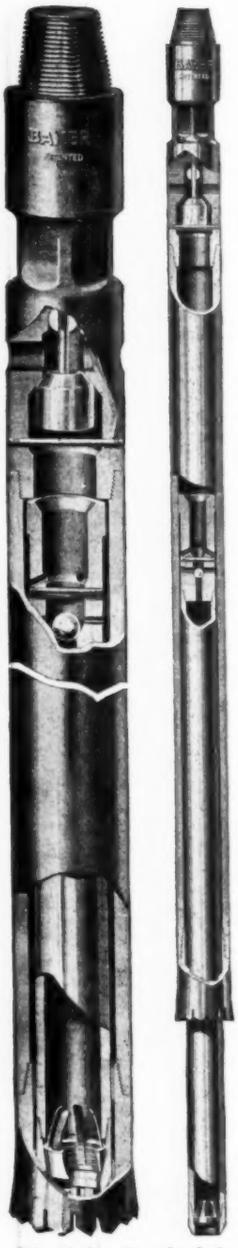

The Baker Standard Core Barrel. Left: Relative positions of drill barrel shoe and core trimmer shoe at end of drilling stroke. Right: Position at beginning of drilling stroke.

WHEN Baker developed the Baker Standard Core Barrel he had years of practical knowledge of oil field conditions and requirements on which to base every detail of design, construction and operation. He knew from first hand information what was needed — the requirements of such a device. He worked from this exact knowledge toward a definite result.

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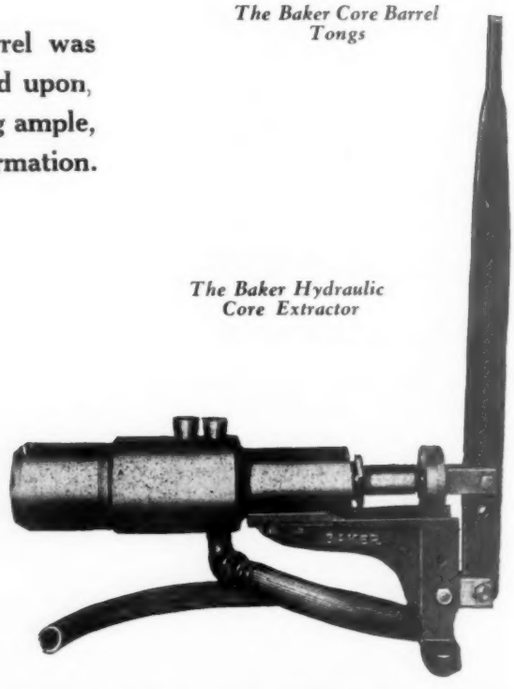

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AUG 20 1928

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The OIL WEEKLY

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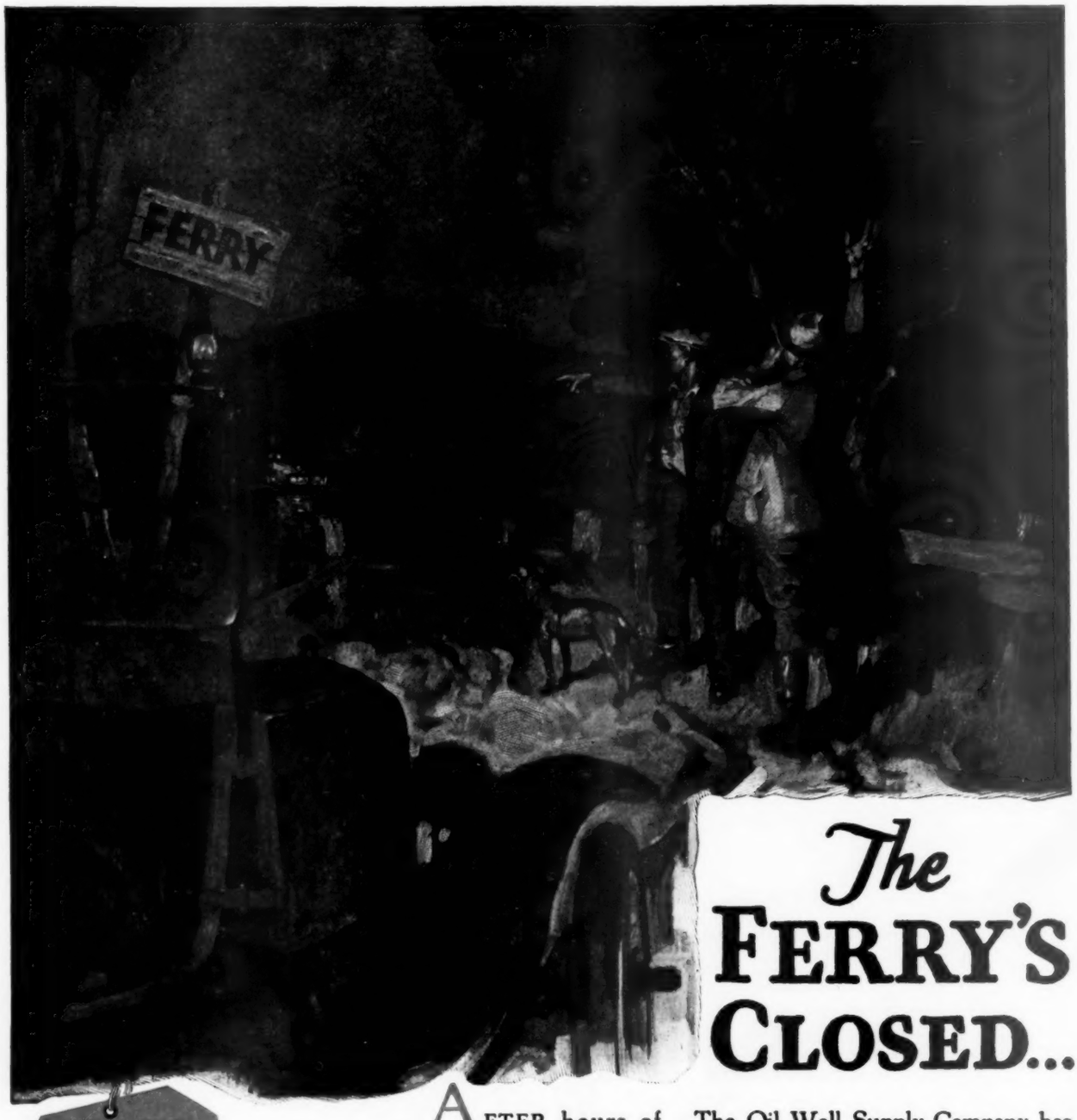

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Say you saw it in The OIL WEEKLY

Crude Market Remains Firm; Refined Products Still Advancing

Production takes tumble despite increase in Oklahoma; proration order will limit Little River following temporary lifting of restriction

By KENT RIDLEY

PRODUCTION took another slight turn downward last week, as estimated by the American Petroleum Institute, only Oklahoma showing any appreciable gain. The latter circumstance was a reversal of conditions for several weeks, and is probably a forerunner of further increases in that state following opening temporarily of the restricted wells in South Little River and consequent sharp increase in that area. Rapid completions of wells shut down on the sand resulted in Little River production Tuesday passing 100,000 barrels and sending the total for Greater Seminole to 297,576 barrels, as compared to the 241,550 barrels daily average recorded for the five pools in the district for the week ending July 11. Little River output is to be controlled, however, by proration which limits recovery after August 15. In the meantime the St. Louis pool is making gains which put it in the class of a market disturber, and Oklahoma producers now are contemplating a curtailment plan which would include the entire state, supervised under orders of the corporation commission.

Refined Products Still Strong

The turn of production in Oklahoma has had the effect of dampening the hopes of producers in that section of further increases in crude prices, although the demand for gasoline and burning oils is keeping the refined market in its strong position and advancing. However, losses shown in Texas and California have been sufficient to immediately offset the gain in Seminole, and that gain probably will prove temporary.

With additional big production in sight in Oklahoma the recent strength witnessed in crude markets takes on a temporary turn. Big Wilcox sand pay at St. Louis field, Pottawatomie County, indicates this area will pass 100,000 barrels shortly unless proration takes a quick hand. Pipe line facilities total 70,000 barrels with about 20,000 barrels capacity building. It is probable that measures for quickly pinching production there will be taken by the conservation committee and umpire.

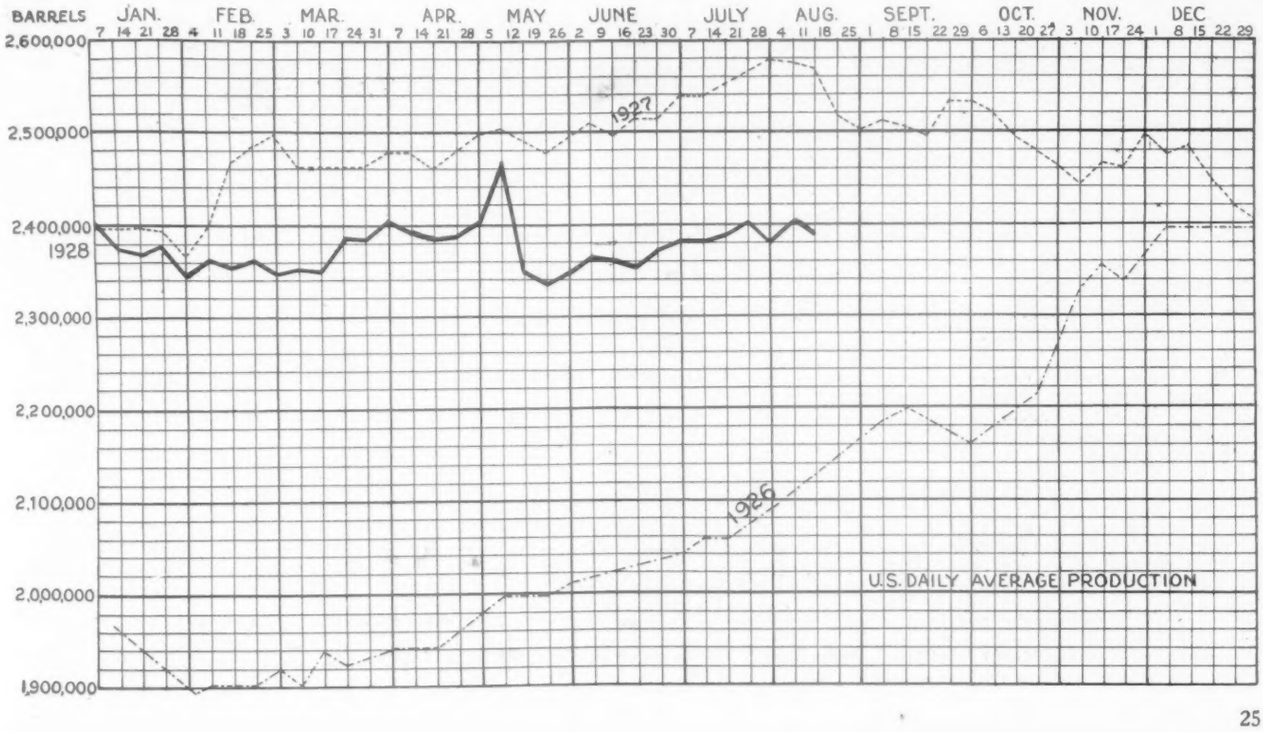
Little hope for near future betterment of light oil in the Mid-Continent is also held up pending the outcome of Little River field, which is officially opened August 15. Water trouble in either of the fields would place an entirely new slant on the situation, however.

Refined products continue stronger in the Mid-Continent. United State Motor gasoline was selling briskly late last week at 9⅝ to 9¾ cents, one-eighth better than a week previous. Mid-Continent refiners are being rushed for orders, and many are behind the demand. Gasoline of 64-66 gravity, 375 end point, is selling at 10¾ cents.

Burning Oils Gain

Burning oils are continually gaining strength. Kerosene of 41-43 gravity water white, is demanding 5¾ to six cents. Six and three-eighths cents is

UNITED STATES CRUDE PRODUCTION TREND



being paid for 42-44 gravity. Fuel oil of 24-26 gravity is selling at 60-65 cents, unusually low for lack of strong demand.

North Texas refiners failed to reach their goal of a flat price of 10 cents per gallon for U. S. motor gasoline over the past seven-day period because of a slight lull in buying on the part of domestic jobbers, but prices on this commodity are firm at a quarter of a cent of the level that plant owners are shooting at. However, the growing demand for kerosene has enabled North Texas plants to boost their price to six cents per gallon and fuel oil is registering a more stable position, with an average quotation of 50 cents per barrel.

Partial relief for the surplus production in the South Vernon field, North Texas district, was assured during the past week when Sinclair Pipe Line Company arranged to extend its gathering system to the Grayback pool and take 2000 barrels of oil daily from Fain-McGaha Oil Corporation's Waggoner "H" lease, while the Waggoner Refining Company is laying a new four-inch line from its Electra refinery to this pool.

The third West Texas field to be placed under proration rules of the Texas Railroad commission became effective August 15 when the deep production in the Chalk-Roberts field, Howard County, was authorized to produce 15,000 barrels daily. However, pipe line companies that are to serve this field had not finished well connections to open all deep wells on schedule. Magnolia Petroleum Company is the only producer with an adequate pipe line outlet and all of this company's wells were opened up prior to the starting on proration. Shell Pipe Line Company is expected to begin serving many of the independent producers before the close of the week with its new line. Humble Pipe Line Company is surveying a route for a line to be built into the field from its Kemper station, Reagan County, a distance of about 80 miles.

Spot Crude Scarce

Offers of spot crude in the West Texas district are very scarce and producers are not making contracts involving future deliveries at flat prices.

Skelly Oil Company has been offering spot oil for tank car movement from its track at Pecos, Texas, and has sold 100,000 barrels of Hendrick crude to the Louisiana Oil Refining Corporation, Shreveport, for tank car delivery at a sacrifice under the field posted and usual pipe transportation and car loading charge, in order to get temporary relief. Skelly is endeavoring to handle all of its allowable production in the Hendrick field through the Pecos rack and its refinery at El Dorado, Kansas, and that of the Crystal Oil Corporation, Shreveport, have been unable to absorb all of it.

While from the surface, the cloud hanging over the industry in California seems very black, there is the possibility that it may have a lighter lining than generally thought. With a merry race on for the new deep zone in the Santa Fe Springs field and Long Beach pouring out about 200,000 barrels, a casual glance fails to throw a ray of hope on the situation; but several factors may enter to alleviate the tension, even during early 1929, when Santa Fe Springs is expected to "do its stuff."

Long Beach, just now the critical market factor, is expected to show a gradual decline after 30 days. With 190 wells drilling, however, the future may hold some surprises. Speaking of the future in connection with the present market seems somewhat out of place, but in California the spot market is always greatly affected by what seemingly lies ahead. Although Long Beach is just now producing much more oil than seems necessary, the fact that a decline will surely set in within a few months has been a stabilizing factor for months.

About 75 locations have been made in the Santa Fe Springs field and the number will soon reach 100. Several wells are already drilling and the possibilities of the new deep zone will be known by January or February. Rumors that proration or curtailment will be enforced are untimely, although an effort is being made along these lines. The field is divided into such small leases that it is almost equivalent to a townlot proposition in some sections. The smaller companies left in the red in 1923 and 1924 are anxious to retrieve losses at the expense of the deep zone. The completion of a small well or an outright failure will dampen some of the enthusiasm. If the first wells are very large, the entire field will be re-developed.

California Gasoline

Little change was noted in the gasoline market during the week. Wholesale prices remain firm, with no change in retail prices. Some of the cut-price refiners have decided to advance their best grade to retail with the posted prices of the leading companies. Export demand is fair, having been stimulated some by the various increases in the Eastern States. The local consumption is running about six per cent. above that of last year. The average yearly increase has been about 10 per cent. during a five-year period, but 1928 is lagging behind 1927, when measured by the 10 per cent increase expected. Some Eastern States are showing a decided preference for California gasoline, because of its anti-knock qualities, while other sections along the Atlantic seaboard are using considerably less than last year.

The fuel oil market is slightly weaker. The increase in refinery runs to supply additional gasoline has caused a throwing-over of the residium or heavier products to fuel oil stocks.

Details on Critical Fields

	Oil Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Prod. Per Well	Rigs Up	Wells Drilling
WEST TEXAS—								
Hendrick	276	1,400,765	5,075	292	182,525	*625	22	135
Church & Fields	185	202,355	1,094	184	37,450	204	..	2
Gulf-McElroy	63	54,110	859	63	14,300	227	1	1
Yates Field	243	1,565,920	6,444	251	73,705	*294	7	19
Totals	767	3,223,150	4,202	790	307,980	390	30	157
TEXAS PANHANDLE—								
Hutchinson County	1,112	546,830	492	981	33,560	34	3	22
Gray County	248	106,480	430	237	20,485	86	8	53
Carson County	180	59,270	329	150	6,630	44	2	7
Wheeler County	42	14,230	339	33	995	30	1	11
Totals	1,582	726,810	459	1,401	61,670	44	14	93
OKLAHOMA—								
Greater Seminole	1,353	1,654,960	1,223	1,115	239,222	214	13	158

(*) Production partially pinched.

Gain in Few Districts Puts July Production Up

General trend in most states is toward reduction in yield and a slackening of field work; price advance important event of month

By A. R. McTEE
Staff Representative

FOLLOWING a gain of 22,000 barrels in daily average output, production of crude in the United States during July went above June figures by 3,052,100 barrels. The general trend in most of the states was toward reduction in yield and also in field work. There was sufficient gain in a few districts, however, to bring about the total increase.

The significant event from every standpoint was the widespread price change which came late in the month. Applying principally to the Mid-Continent and Central States, the advances were on the higher grades of oil. Slight reductions were made on lower gravities.

UNITED STATES PRODUCTION

Following is the gross production of crude oil in the United States for July as compiled by the American Petroleum Institute. There is a slight difference in the totals herewith shown and those compiled showing individual field production, due to the fact that these figures are final, whereas the others are unrevised estimates:

States—	Daily Average	Monthly Total
Oklahoma	587,150	18,201,650
Kansas	102,750	3,185,250
Texas (Outside the Gulf Coast)	597,250	18,514,750
Gulf Coast	133,650	4,143,150
North Louisiana	42,150	1,306,650
Arkansas	90,700	2,811,700
Eastern States	113,400	3,515,400
Rocky Mountain	80,400	2,492,400
California	644,700	19,985,700
Total	2,392,150	74,156,650

In posting the change in price a major company justified its action with the statement that the value of a barrel of light crude to the refiner had increased recently because of the advance in the wholesale price of gasoline. On the other hand, heavy crude declined in value due to the decrease in the price of fuel oil. Heavy seasonal consumption of gasoline brought about an increase in refinery crude runs which in turn resulted in the production of fuel oil in excess of current consumption. A falling market attended the overproduction of fuel oil. Consequently the value of light crude did not increase proportionately with the improvement in the wholesale price of gasoline.

As compared with June, field work dropped slightly in July. There was a decrease of 11 in the total number of completions. Producers fell below the number reported in June by 14, but there was a gain of 53 in gas wells. Failures decreased 50. Due to a heavy run of big wells in West Texas late in the month, initial production was boosted above June totals by 65,307 barrels, with a total of 522,969 barrels.

Texas led all other states in work and also in initial yield. Oklahoma was second in field statistics, but California ranked next to Texas in initial production, exceeding Oklahoma by more than 3,000 barrels.

States showing gains in output over June included Texas outside the Gulf Coast, Eastern States and California. The Texas increase amounted to 1,882,750 barrels. California showed more than a half million barrels additional oil over June, and Eastern States were up approximately 200,000 barrels.

West Texas

More than a half dozen wildcat oil producers were discovered during July in the North, Central West and West Texas districts, but all were of comparatively small caliber and carry little market significance.

The West Texas district contributed another large quota of new production during July because of the flush output of new completions in the Hendrick and Yates fields, where proration enforcement has greatly aided in retaining the "head" on the oil and gas horizons. Although these two fields are allowed to produce only a small fraction of their estimated daily potential yield, field work has been pushed to maintain allowable production quotas, or increase same. However, practically all 100-acre units on the Yates field structure will have production by the middle of August, and little incentive will remain to continue drilling with the present proration plan in effect. In the Hendrick field, the high mark on field work was reached about middle July, and will register a slow but steady decline from now on, barring the possibilities of important extensions being given the producing area to the north or south. These are the only two directions that the field is considered likely to extend, and then the outlying acreage is so closely held that a big drilling campaign is very improbable.

Flowing oil production was uncovered in the Southeast corner of Culberson County, and about 50 miles from the nearest producer, late in July when the Deep Rock Oil Company and Grisham-Hunter Corporation's wildcat producer on the Bettis land drilled anhydrite and sand at 1483-95 feet, with an estimated production of 200 barrels of 36 gravity oil during first 24 hours. However, this flow proved short lived, and at late reports the well appeared to have exhausted itself, but does indicate more favorable prospects for oil in this general area. Wildcats drilled by the Empire Gas and Fuel Company and the Moore-Kennedy interests in Irion County encountered favorable showings of high gravity oil at shallow depths in July, but commercial producers from these tests did not look favorable when drilled deeper into the pay.

Howard County's producing area was extended to the north, west and south by completions on the Roberts and Settles lands, and a substantial gain in field work was registered in July because of the Texas Railroad Commission issuing an order to prorate the deep producers in the Chalk-Roberts field effective August 15, with a limit of 15,000 barrels daily given the deep production during the first month, and 25,000 barrels daily during the following five months. The deep pay area is to be divided into 40-acre units, and only one well to each sand is to be drilled, but this will lead to a big development program during the next few months.

Central-West Texas

In the Central West Texas district, Coleman County added a deep and a shallow pool during July. Henshaw Oil Corporation's Harris 1, located south of Valera, made a 55 barrel pumper at 2611-22 feet. Kingwood Oil Company's wildcat test on the McCord farm, located in Western Coleman County, is showing for a small flowing well in lime at 3498-3500 feet, while re-setting casing to drill in. L. H. Wentz and associates' wildcat test on the Ross Elliott land in Southwestern Stephens County, opened a new oil field in the Caddo lime late in July with a 100

barrel well at 3393-3404 feet. Field work in Brown, Shackelford, Eastland and Callahan Counties dropped off in July. The slump in Brown County is largely due to the drilling up of new pools uncovered earlier in the year.

North Texas

The South Vernon district, Wilbarger County, supplied the bulk of the new production credited to the North Texas district during July, and also took the lead on county production, with a large amount of production shut in on the Waggoner Ranch for market outlet. Pipe line companies have been slow in increasing their line capacity to this area, owing to the refusal of the W. T. Waggoner Estate, which retains the right to purchase all oil produced on its land, to sign contracts to sell the oil for two or three-year periods. New completions in the Grayback section of the South Vernon district during July were numerous, and many wells ranged from 2000 to 3000 barrels initial. Many wells have been shut down on top of the pay, pending a pipe line connection, while proration of pipe line runs has been resorted to on some leases. Daily production in Wilbarger County is expected to go to 50,000 barrels, if pipe line facilities were available.

Two new shallow pools were added to North Young County during July, including W. M. Langee et al's Swain-Robinson 1, Section 1466, with an initial production of 40 barrels of oil at 714-719 feet. Prairie Oil & Gas Company's wildcat test on the Campbell land, Section 1370, was showing for a 25 barrel pumper late in July from sand at 977-79½ feet. Field work in Wichita, Archer, Young, Cooke, Montague and Jack Counties registered a slight gain during the past month, while two new flowing wells in the Daugherty-Bryson pool, Western Jack County, indicate that an important Strawn sand pool has been uncovered by the Panhandle Refining Company.

Texas Panhandle

Routine developments of little importance were reported from the Texas Panhandle district, with the bulk of the new field work taking place in Gray County. The posting of higher crude prices in this district will prevent the early abandonment of a number of small pumpers, which could not be operated at a profit on former prices. The Skelly pool on the Moore-Hutchinson County line added its second oil producer late in July when Skelly Oil Company's Armstrong & Byrd 3 swabbed 620 barrels initial at 3190 feet.

Gulf Coast

Discovery of big deep production in the old North Dayton district of the Texas Gulf Coast was the outstanding development of the month. The well was completed by the Harrison Oil Company, for 4600 barrels at 4317 feet. Gravity of the oil tested 38.6 degrees. Production was through a one-inch choke, with initial pressure of 325 pounds. Harrison Oil Company controls most of the acreage considered good prospective territory, hence the discovery will probably not lead to much drilling by other companies.

Louisiana

In the Louisiana coast district most of the development was at Kelso Bayou, Cameron Parish. In that area four producers were completed during the month, two by the Calcasieu Oil Company and Magnolia Petroleum Company drilling jointly, and two by Yount-Lee Oil Company. Several failures were also reported from the same district.

Arkansas

Practically all work in Arkansas was confined to the Champagnolle area but there activity is slowing down. The field showed 13 completions, 12 of which were producers. Production for the state was below that of June by nearly 300,000 barrels the most of which was from the Champagnolle area.

Oklahoma

Outside of the Little River area, Seminole district, activity in Oklahoma was quiet during July. In the Little River field however, when drilling restrictions were removed toward the middle of the month, there was a rush of work resulting in 132 new locations on July 21, and more than 80 per cent. of the number were drilling.

A Corporation Commission order provided that none of the new wells should produce more than 100 barrels daily before August 15. After that date wells could be opened to 1600 barrels to the 40 or 800 barrels to the 20-acre tract.

Kansas

Kansas showed decreased production with slackening field work throughout the entire month.

California

July was crowded with important discoveries in California, three of which are expected to exert considerable influence on the oil industry in the state. The discovery of a new deep zone in the Santa Fe Springs field, a new light oil field in Santa Barbara County, a 3500-barrel well in the old Midway field, a new black oil field in San Luis Obispo County and the failure of the Long Beach field to decline, kept the entire industry on edge all during the month and left it wondering what may be the result from such a cluster of varied discoveries.

The new deep zone in the Santa Fe Springs field undoubtedly is the most important discovery of the year. The Wilshire Oil Company's discovery well came in flowing 2800 barrels of 38 gravity oil from about 6000 feet. Due to the secrecy surrounding the test from start to finish, no definite figures are available. The oil is clean and contains a very high percentage of gasoline. Every company holding leases near the new well immediately rushed in equipment and within 24 hours more than a dozen locations were made. Practically the entire field will be re-developed. The Meyer zone, which lies above the new deep formation, declined rapidly, allowing the first wells to get the cream of production. With this fact in mind, the

(Continued on page 34)

Detail figures for all fields will be found on page 60

UNITED STATES FIELD STATISTICS

Following are the completions showing producers, gas wells, failures, and initial production of crude by states for the four weeks ending July 28, as compiled by The OIL WEEKLY:

Arkansas	29	13	1	15	9,295
California	52	46	..	6	62,965
Illinois	11	10	1	..	192
Indiana	..	..	..	..	.....
Kansas	77	33	7	37	7,047
Kentucky	106	63	1	42	2,872
Louisiana	59	22	18	19	9,934
Michigan	10	10	..	..	1,389
Mt. States	..	..	..	..	.....
New York	42	41	..	1	110
Ohio	86	50	15	21	3,262
Oklahoma	304	145	49	110	59,731
Pennsylvania	168	146	15	7	552
Tennessee	..	..	..	..	.....
Texas	501	289	23	189	365,399
West Virginia	89	14	59	16	212
Totals	1534	882	189	463	522,969
Last Month	1545	896	136	513	457,662

PAST TWELVE MONTHS

The record for the past twelve months is an interesting study for comparison purposes, the following table giving field statistics for all States in the Union:

Month—	Completions	Producers	Gas Wells	Failures	Initial Prod.
June, 1927	1,726	1,049	178	499	359,380
July	2,036	1,219	238	579	486,489
August	1,642	982	207	453	439,735
September	1,870	1,092	228	551	380,851
October	1,541	870	225	446	322,603
November	1,651	901	205	545	367,657
December	1,857	1,020	311	256	522,536
January, 1928	1,203	640	179	384	396,150
February	1,376	729	197	450	336,319
March	1,693	884	283	526	555,613
April	1,486	772	216	498	397,825
May	1,495	770	186	539	413,378
June	1,545	896	136	513	457,662
July	1,534	882	189	463	522,969

Dearth of Tankage Delays Opening Of Chalk-Roberts Pool

Commission order limiting recovery on proration basis to become effective when production can be handled; work on lines rushed

By H. H. KING
Staff Representative

BIG SPRING, Texas—Tankage and pipe line connections will not be available to permit the opening of the deep producers in the Chalk-Roberts field, located on the Howard-Glasscock County line, to a maximum of 15,000 barrels daily beginning 7 a.m., August 15, in accordance with the proration order published last week by the Texas Railroad Commission. All deep producers in the field, except those on the Magnolia Petroleum Company's Dora Roberts lease, have remained shut in since completion for lack of storage and a pipe line outlet, and the crude purchasing agencies now building lines into the field will not be ready to serve their promised connections for several weeks.

E. E. Andrews, Abilene, independent operator, was appointed umpire for the field by the Texas Railroad Commission last week and arrived Friday to make a study of field conditions and assume charge of the proration enforcement. Andrews is a veteran operator, having a broad experience in the producing and refining branches of the industry in both the Eastern States and the Mid-Continent. He has been maintaining his home at Abilene since that general section of Texas began contributing new oil pools within the past year or more.

Proration Committee Meets

The Howard County proration advisory committee, consisting of six operators and officials of companies with production in the deep pay, and Robert T. Piner, Big Spring banker and agent for the Dora Roberts Royalty interests, is scheduled to meet with Umpire Andrews at Big Spring Tuesday, August 14, to perfect plans for gauging all wells for their potential production. Piner is chairman of this committee.

Wells producing from sand horizons above the 1800-foot level in the Chalk-Roberts field are not involved in the proration order, and will not be restricted on production. This shallow production averages 31 to 33 gravity, and is practically free of sulphur, while the lower pays carry a high sulphur content and the gravity ranges from 25 to 29. The shallow oil is finding a ready market at 80 cents per barrel with the Coltex Refining Company, which delivers same via pipe line to its 8000-barrel skimming plant at Colorado, Texas. The deep production is posted at 65 cents per barrel by Magnolia Petroleum Company, but no deep oil of any appreciable volume has been sold.

The deep producing area is to be divided into 40-acre units, according to the terms of the commission's proration order, and only one well can be drilled to each separate deep horizon, except to take care of offsets. The deep wells are to be limited to 15,000 barrels daily during the first month, and 25,000 barrels daily during the following five months. The wells are to be gauged by the umpire, or his assistants, on or before the fifteenth day of each month for potential production, and the production allotment will be determined on a basis of average potential production. The field's daily allowable production shall be allotted ratably to each separate lime pay horizon in the proportion which the aggregate daily potential production of all wells producing from each such horizon bears to the aggregate daily potential production of all wells producing from all such horizons in the field.

Magnolia Opens Wells

Magnolia Petroleum Company is the only deep producer in the field with existing facilities to flow its wells into tankage and pipe lines, and early last week opened its wells. Magnolia Pipe Line Company has a four-inch line extending from its field pump station on the Roberts lease in the northwest quarter of Section 157, to a large tank farm, located near Iatan and on the West Texas-De Leon trunk line, with a parallel six-inch line nearing completion. Magnolia Petroleum Company opened its Roberts 1, which discovered the 2900-foot lime pay in October, 1927, early last week and it flowed 1500 barrels during the first 18 hours. This well flowed about 225,000 barrels before it was shut in last February, in accordance with a general agreement among nearby operators. This discovery well had increased its flow to 2620 barrels daily late last week, and the five wells on the lease made 4850 barrels daily on open flow. This discovery well registered a rock pressure of about 12 pounds when shut in, thus indicating the lack of "kick" behind the oil flow.

No Tanks for Gauge

The initial potential gauge of wells in the deep horizons will have to be determined by brief open flow tests, since tankage is not available at many of the wells other than the Magnolia Petroleum Company's lease. Magnolia Pipe Line Company is expected to provide pipe line connections for a few of the operators when the official proration order becomes effective, while in the meantime the Shell Pipe Line Company is to build into the deep area with an eight-inch extension from its McCamey-Cushing trunk line. Humble Pipe Line Company started surveying August 10 from its San Angelo main line station on the Kemper-Comyn double eight-inch trunk line system to Howard County, a distance of about 80 miles. The Big Spring Pipe Line Company is at work on a 15-mile 4½-inch line from the Big Spring refinery of the Big Spring Refining Company, but will not be able to handle any oil until September. Cosden Pipe Line Company has awarded turnkey contract for the immediate construction of a 12-mile eight-inch welded line from the Chalk-Roberts field properties of Cosden & Company to the latter's refinery and tank farm near Big Spring, but a month or more will elapse before this line and the necessary large tankage can be made available to run the deep production now shut in on Cosden's properties.

The new oil pay and westward extension given the Chalk-Roberts field August 3, by McGinley-Sigler Company-Henshaw and Lee Davis' Eason-Settles 1, which gauged 60 barrels of 32.5 gravity oil per hour from lime at 2208-10 feet, has materially enhanced the importance of the field, and a revival of lease and royalty trading followed this strike. This well is located in Section 6, Block 32, and found the big pay when carried 260 feet into the big lime, while in the field proper the wells drill from 400 to 900 feet of lime before encountering production. Several lease trades were made last week involving more than $1000 per acre considerations. The Eason-Settles well is pinched to about 100 barrels daily, and an effort is being made to obtain a pipe line connection.

Dallas, Texas—Atlantic Pipe Line Company has welded about 60 miles of its trunk line system, which will extend from Midland tank, West Texas district, to Atreco, near Beaumont, a distance of about 530 miles. The stringing, doping and trenching for this line is being done by contract, while the welding work is performed by crews organized by the company. Crews are working on both ends of the system, while an intermediate crew was scheduled to start work this week at Rosebud, Falls County. Other crews are being scattered along the route to speed up construction as rapidly as experienced welders can be engaged.

Winkler County Operators Ready For Llano Showdown

Decline of field work in Hendrick field has lessened objections to development of area to north; Hendrick prolific production widened

By H. H. KING
Staff Representative

SAN ANGELO, Texas — The crude market threat heretofore credited to the Llano pool, located north of the Hendrick field and on the Texas-New Mexico State line, is giving less concern to operators since two recently drilled tests encountered the big lime horizon comparatively low on structure and opposition has been withdrawn against the early completion of these tests. Texas Pacific Coal & Oil Company and Roxana-Llano Oil Company are proceeding with the completion of their tests on the Daugherty and Scarborough ranches. The Llano pool is generally accepted as being the only potential flush area awaiting developments in West Texas, and with drilling on the decline in the Hendrick field the operators are ready to have a showdown as to its possibilities.

Two deep lime tests in the Chalk-Roberts field, located on the Howard-Glasscock County line, encountered sulphur water early this week. The F. H. E. Oil Company's Roberts 1-C, located in the northwest corner of the southwest quarter of section 156, encountered a hole full of sulphur water, and on the north end of the deep pay area Amerada and Rycade's Stewart 1, located in the southeast corner of Section 130, got a hole full of water at 3122 feet. These two tests may succeed in plugging back and make small producers.

Hendrick Field Fire

A stubborn oil well fire on the east side of the Hendrick field was finally controlled early Monday morning after three days of continuous fighting on the part of Roxana Petroleum Corporation's field forces and a special crew of fire fighters. An unexpected blowout while drilling in a well on Roxana Petroleum Corporation's Hendrick "F" lease was the scene of the fire and attempts to put out the burning oil and gas with nitroglycerine met with failure, while a large battery of steam boilers extinguished the flames.

Heavy rainfall was indirectly responsible for Roxana Petroleum Corporation's Hendrick 3-F, located on south line of the southwest quarter of Section 46, Block 26, becoming ignited early Friday morning. The rain thinned the rotary mud in the pit while the crew were drilling into the oil and gas pay below the 2700-foot level, and the well blew out. It caught fire shortly while making an estimated flow of 25,000,000 cubic feet of gas and 2500 barrels of oil daily, but the open flow resulted in a steady increase in production, with the drill stem in the hole. The services of Tex Thornton, prominent well shooter of Amarillo, were obtained promptly to aid in bringing the well under control. Gulf Production Company is drilling the south offset to the burning well, while the nearest oil production is about one-quarter of a mile to the west.

Work Declining

Gradual decline in field work in the Hendrick field during the past few weeks has lessened the objections previously raised by Winkler County operators against drilling in new tests in the Llano field, located to the north on the Winkler County-New Mexico line, and two important tests drilled to the big lime are now to be drilled in. Texas Pacific Coal & Oil Company's Daugherty 1, located in the southeast corner of Section 4, and about one-half mile southwest of the Atlantic-Kessler-Logan producer, is preparing to resume drilling after cementing casing at 2893 feet, where the top of the lime is believed to have been encountered. Roxana Petroleum Corporation and Llano Oil Company's Scarborough 3, located near the center of the southwest quarter of Section 2, Block "C-23," and near the New Mexico line, resumed drilling late Saturday at 2974 feet (corrected depth to steel line measurements), and at late report had drilled to 2992 feet. This test is credited with having logged the top of the big lime at 2972 feet (SLM), with a surface elevation of 2939 feet. The above two tests are being followed closely, and if big oil production is scored other tests will follow promptly, as Humble Pipe Line Company has an eight-inch line extended from the Hendrick field to this area.

The prolific section of the Hendrick

HENDRICK FIELD OPERATIONS

The status of operations in the Hendrick field, West Texas district, at the close of last week is shown below by companies:

Company	Locations and Rigs	Drilling Tests	Tests in Big Lime	Completed Wells	Initial Produc'n	Average Produc'n
Amerada Petroleum Corp.	..	..	1	..	.....	.....
Arizona Mining & Eng. Co.	..	..	1	..	.....	.....
Atlantic Oil Producing Co.	..	3	3	22	107,360	*12,275
Atlantic-Kessler & Logan	..	..	..	1	2,500	1,395
Atlantic & Collett-O'Keefe	1	..	2	9	127,000	*13,880
The California Company	..	..	..	8	7,550	1,785
Cranfill & Reynolds, Inc.	..	..	2	6	53,825	*5,960
Culberson Bros. et al	1	..	..	..	.....	.....
Eastland Oil Company	..	1	1	..	.....	.....
El Paso Production Co.	..	1	..	..	.....	.....
Gulf Production Co.	..	5	7	17	114,310	*10,345
Humble Oil & Refining Co.	3	2	..	30	93,070	*12,090
Independent Oil & Gas Co.	2	..	5	15	61,220	*5,120
Magnolia Petroleum Co.	..	..	..	8	12,335	1,665
Marland Production Co.	1	1	1	5	44,300	*3,820
May Production Co.	..	1	..	..	.....	.....
Murchison-Cranfill Bros. Oil Co.	1	..	3	6	12,675	*3,195
Clint W. Murchison et al	..	..	1	..	.....	.....
Prairie Oil & Gas Co.	..	..	3	3	39,000	*2,565
Pure Oil Company	3	..	8	20	81,085	*14,035
Republic Production Co.	..	..	7	8	23,510	*6,740
Roxana Petroleum Corp.	..	..	6	28	179,730	*22,300
Roxana & The Texas Co.	1	6	12	21	156,415	*14,215
Skelly Oil Company	..	..	5	8	115,300	*16,250
Southern Crude-Dixie Oil Co.	1	5	6	22	47,265	*7,540
Southern Crude-R. A. Westbrook	9	11	20	32	106,080	*23,515
Texon Oil & Land Co.	1	..	5	6	25,275	*3,675
Winkler Oil Prod. Corp.	..	..	..	1	3,600	*160
Total	24	36	99	276	1,400,765	182,525
Total previous week	28	38	95	270	1,371,065	174,275

*Production partially pinched.

field was widened to the south last week when Mid-Kansas Oil & Gas Company and Transcontinental Oil Company's I. G. Yates 2-H, located near the center of Section 32, Block 194, gauged 2500 barrels of pipe line oil per hour from regular pay at 1558-1735 feet, with a surface elevation of 2912 feet. A string of eight-inch casing was cemented at 1402 feet in this well. Three more machines were ordered moved in on this section after this heavy production was found.

The discovery well of the Yates field on the above partnership's Yates "A" lease was placed in the gusher class late last week when deepened from 1032 to 1150 feet, responding with a natural flow of 2190 barrels of clean oil per hour via three four-inch flow lines. This well was originally placed on production as a 300-barrel well October 30, 1926, at 995-997 feet, and has been deepened by stages, with big increases in each instance. Roxana Petroleum Corporation's M. A. Smith 1-D, Section 24, recently extended the southwest edge of the producing area with a natural flow of 80 barrels per hour at 1673-1840 feet.

Pumping attempted on the wildcat test of the Deep Rock Oil Company and Grisham-Hunter Corporation on the Bettis land in Southeastern Culberson County failed to produce a commercial producer, although the well flowed several hundred barrels of high gravity oil on July 30-31 from anhydrite and sand at 1483-95 feet. This oil probably came from a pocket, and soon exhausted. The owners plan to deepen the test to try for a lower pay. Deep Rock Oil Company's wildcat test on the Harris ranch in Andrews County, which has been recording small showings of gas and oil, was idle early this week pending repairs to the drilling machinery at 4331 feet. This wildcat makes about one bailer of oil per day from lime pay at 4210-63 feet and 4270 feet, having topped the big lime at 4005 feet, with a surface elevation of 3173 feet.

Houston. — The Calcasieu Oil Company, Magnolia Petroleum Company and the Union Sulphur Company, operating jointly, now have eight producing wells, with an average daily production of about 1850 barrels, in the Kelso Bayou field, Cameron Parish, Louisiana. The producers include Watkins 1, 4, 5 and 7; Caldwell 2 and 3; Valery 1 and Olevia 1.

Shreveport, La.—Locations recently made in Arkansas include that of the Phillips Petroleum Company for its Arkansas Timber and Land Company 1 in the center of a 5000-acre block, 775 feet south and 330 feet west of the center of Section 29-16s-12w, Calhoun County; and The Texas Company's Gay 1 in a 75-acre block in Section 33-16s-4w, Chicot County. The Texas Company well will be drilled to approximately 3500 feet.

Assemble Materials For Cosden Line

Big Spring, Texas—Materials are being assembled by the Cosden Pipe Line Company for the immediate construction of a 12-mile eight-inch welded crude line from the producing properties of Cosden & Company, in the Roberts-Chalk field, Howard County, to the latter's refinery and tank farm site on the Texas Pacific Railroad near Big Spring. The laying of this line will be done by contractors, and the field gathering station will be located near the center of Section 129, Block 29, W&NW Ry. survey, Howard County. The refinery site consists of 680 acres adjoining the railroad in Sections 38 and 47, Block 32, T&P Ry. survey, Tsp. 1-N. Cosden & Company and W. D. Richardson of Tulsa recently placed orders for erection of four Jenkins cracking stills and two pipe stills, having a capacity of 10,000 barrels of crude daily, and the plant is to be in operation late this year.

The Cosden Pipe Line Company was given charter to operate under the corporation laws of Texas with a capital stock of $10,000 last week, with headquarters in Fort Worth National Bank Building, Fort Worth. J. S. Cosden is president and A. G. Reed is vice president.

New Shallow Field

Wichita Falls, Texas.—Woodson Oil Company's wildcat test on the Overcash land established a new shallow oil pool on the southeastern part of Throckmorton County late Friday with an estimated production of 100 barrels of 35 gravity oil from top of sand at 1307 feet. Humble Pipe Line Company was making connections to the well early this week, having extended a line from the Woodson-Parrott field, located several miles to the east. The Overcash well was flowing by small heads early this week, with 30 feet of casing in the hole and 10-inch casing set at 1218 feet. It is located in the southwest part of Section 96 and on a quarter section tract. Leon E. English worked out the geology for the Woodson Oil Company on this wildcat strike. R. D. Clancy is president of the latter company with headquarters at Woodson. Reiter-Foster Oil Company, Gulf Production Company and Rycade Oil Corporation own the offset locations.

Railroad to Hendrick

Fort Worth, Texas.—The Hendrick field, West Texas district, is to receive its first direct railroad connection on or before May 1, 1929, as result of the Interstate Commerce Commission announcing from Washington on August 8 that permit had been granted the Texas & New Mexico Railroad Company to build an extension line from the Texas & Pacific Railroad at Monahans, Ward County, to Wink, located on the south end of the above field, thence to the Texas-New Mexico state line, a total distance of 35 miles. Actual construction must be started by October 1, 1928.

This line will not be completed before the Hendrick field is practically drilled up, but it will serve the Llano pool, located about nine miles to the north when a drilling campaign is launched next spring, while it will also aid in the establishment of natural gasoline and carbon black plants in Winkler County and Lea County, New Mexico. Supply companies, with only a few exceptions, have located at Pyote, which is situated about 18 miles south of the Hendrick field, and all of these will have to be moved to the field proper upon the completion of the railroad, which will cost about $708,000.

Pondera-Bannatyne More Active

Great Falls, Mont.—Activity in the new Pondera and Bannatyne fields, northwest of this city, has materially increased with the completion of three wells at Pondera and two at Bannatyne. This brings the total number of producing commercial wells at Pondera, west of Conrad, to seven with an average estimated daily output of 100 barrels each. Nine more wells are drilling in this field with the prospect that at least one will be completed this week. Keeping pace with these developments the pipe line laid by Texas Pacific Coal & Oil Company's subsidiary, Thurber Pipe Line Company, from Conrad, has completed its line and connected it with one 5000-barrel storage tank, and is now running oil.

In the Pondera field the California Petroleum Corporation's Copley 1, northeast of Section 15-27-4w, was the best completion, it having a production of 150 barrels at 1810 feet. The Texas Pacific Coal & Oil Company's Hirshberg 3, southwest of Section 14-27-4w, has an estimated production of 50 barrels and the Ohio Oil Company's Hirshberg 1, southeast of Section 15-27-4w, is completed at about the same depth and is producing 75 barrels.

In Bannatyne the "56" Petroleum Corporation has about a 25-barrel well in the northwest of Section 14-25-1e, at 1496 feet, and the Hardrock Oil Company's Speer No. 1, northeast of the southwest of Section 5-25-1e, will be about the same size, at 1430 feet.

Houston—The Texas Company's Pickett 2, completed about two weeks ago as the most northwesterly well at South Liberty, was producing around 240 barrels daily early this week, flowing through tubing.

Shreveport, La.—Dixie Oil Company has made location in Claiborne Parish for a test of a known structure, the well to be drilled to 4500 or 5000 feet. The location is on a 7500-acre block, being at the center of the northeast of the northeast of Section 21-21s-5w.

Little River Restrictions Off; Production Jumps

Lid was lifted on completions in South Little River Saturday and 16 wells were completed in three days, adding 50,000 barrels to output

By WALLACE DAVIS
Staff Representative

TULSA. — Production decline in the Mid-Continent apparently has been checked for a period of considerable duration. The expiration date of drilling restrictions in South Little River came at midnight, August 11, resulting in an increase of nearly 50,000 barrels production within three days in this field.

The lid was lifted on well completions in South Little River Saturday night, resulting in resumption of drilling in 25 wells temporarily shut down on top of the Wilcox sand, and 16 of this number were on production by Monday morning. Ten additional wells were showing oil, and approximately 20 more nearing the top of the pay. Aside from these, there were more than 30 operations below standardized depths. Little River gauged 90,923 barrels Monday as compared with 52,146 barrels on Sunday, and production was estimated to reach 110,000 barrels before the proration order of August 15 went into effect, limiting production to 1600 barrels to the 40-acre tract or 800 barrels to the "twenty."

Umpire Collins stated Tuesday that the 1600 barrels to the 40-order in south Little River field would become effective Tuesday at Midnight, but that wells completed after that time would be allowed three days open flow before being pinched to meet the order.

Listed in the accompanying table are the new wells completed in South Little River field during the first two days following removing of "drilling in" restrictions.

Results of opening Little River field temporarily can be seen in the following gauges of Seminole pools for August 12 and 13, by fields:

	August 12		August 13	
Field—	Wells	Prod.	Wells	Prod.
Little River ..	153	52,146	159	90,923
Bowlegs	325	54,115	325	55,324
Earlsboro . ..	277	79,880	277	81,446
Seminole City	294	48,078	294	49,272
Searight	69	13,975	69	12,443
Maud	3	49	3	48
Totals . ..	1121	248,243	1127	289,456

Water has appeared in four South Little River wells. Independent Oil & Gas Company's Williams 1, in the southeast of the northeast of the northeast of Section 15-7-6, on the west side of the producing area, was drilling late last week at 3830 feet with a hole full of water. T. B. Slick's Williams 3, to the south, had a hole full of water Sunday in sand at 3855-3929 feet. Continental Oil Company's Milsey 1, in the southwest corner of Section 11-7-6, had 600 feet of water from sand at 4040-45 feet, and was running 6⅝-inch casing to bottom. Pure Oil Company's Cotcha 4, in the northwest of the southeast of the northeast of Section 23-7-6, near the south end of the field's production, went into water in Wilcox sand at 4566 feet, and after producing two bailers of salt water per hour, shut off the water by plugging back to 4564 feet, four feet in the pay. It flowed 555 barrels after plugging back Sunday morning.

(Continued on page 34)

NEW LITTLE RIVER WELLS

Company, Well and Location—	Wilcox Sand Feet	Initial Prod. Bbls.
Independent-Texas Co., *Hotulke 2, sw nw 23-7-6	4325	6400
Prairie Oil & Gas Co., Talley 1, nw se sw 14-7-6.....	4449	3685
Prairie Oil & Gas Co., Gibson 2, ne sw nw 14-7-6 4446-4451		6420
Prairie and Amerada, Sonny 4, nw ne nw 14-7-6 4262-4266		1700
Blackwell O. & G. Co., Baker 4, sw ne se 11-7-6 4150-4169		600
Independent O. & G. Co., Tewee 2, sw ne se 14-7-6 4193-4203		5535
Roxana Petroleum Corp., Johnson 3, sw nw 13-7-6	4390	5044
Gypsy Oil Co., Hulhoke 5, se 14-7-6 4364-4366		5040
Barnsdall Oil Co., Hotulke 2, ne se 22-7-6 4171-4178		1085
Gypsy Oil Co., Cotcha 1, nw sw 23-7-6	4334	1350
Blackwell O. & G. Co., Baker 1, sw nw se 11-7-6 4534-4537		300
Gypsy Oil Co., Hulhoke 4, sw se 14-7-6 4202-4205		5400
Reiter-Foster, Bunyard 2, nw sw 14-7-6 4253-4256		3450
Pure Oil Co., Cotcha 1, ne 23-7-6 4295-4302		3679
Gypsy Oil Co., Hulhoke 2, ne se se 14-7-6.....4516-4524		2100
Pure Oil Co., **Cotcha 4, nw se ne 23-7-6 4560-4564		555

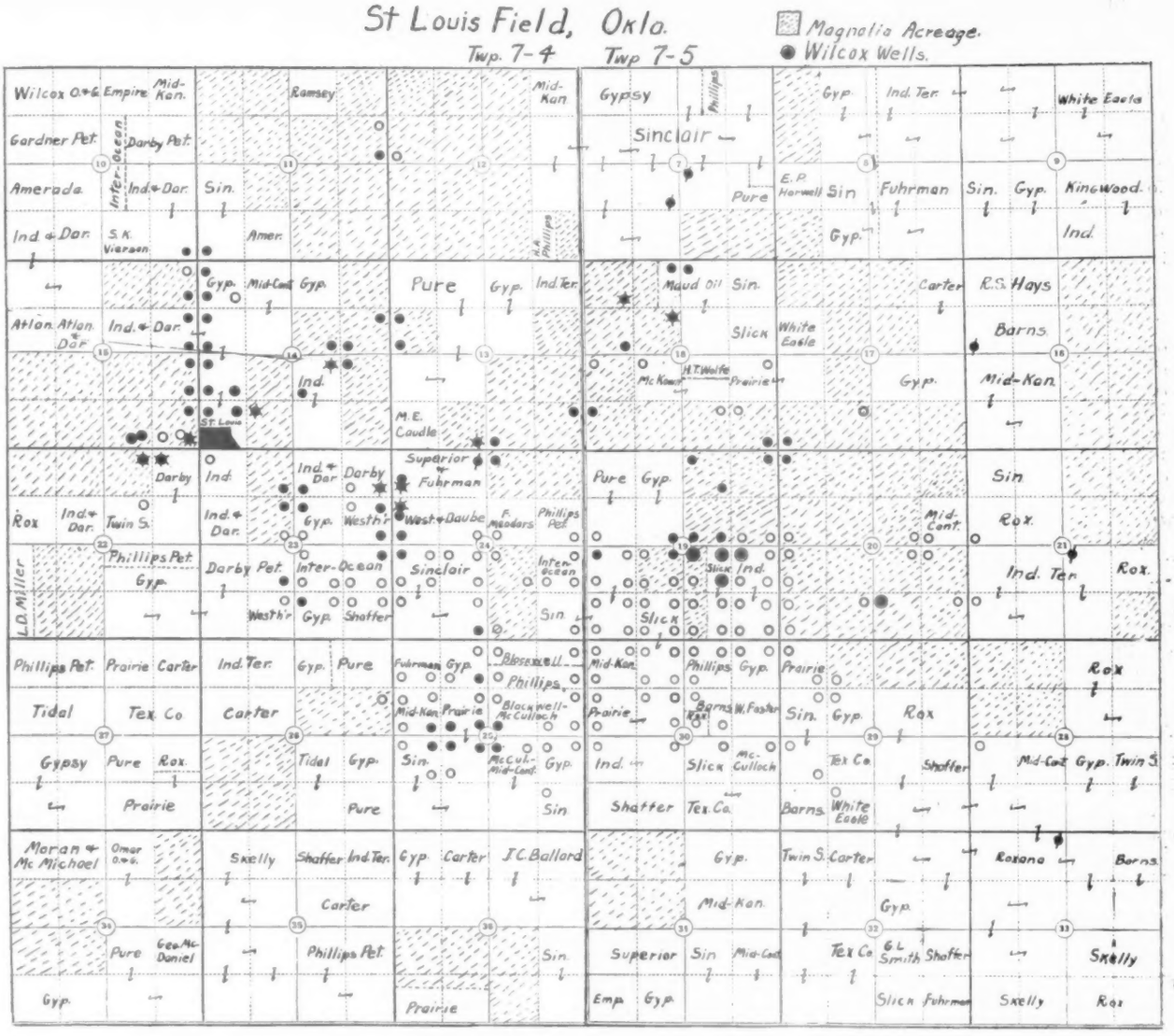
* Caught fire and rig burned—well still burning after 24 hours.
** Made two bailers salt water an hour from 4560-66 feet, and plugged back two feet, shutting off water.

St. Louis Field Due to Get Thorough Development

TULSA.—St. Louis field has finally demanded recognition. Until three months ago mention of it had to be qualified to steer the public mind off the Missouri metropolis. The village of St. Louis, Pottawatomie County, Oklahoma, with one street lacked popularity then.

Little more than two months ago St. Louis field still struggled after a year of drilling activity as a possible, not probable, source of big pay. Water had taken the Wilcox sand in tests drilled for that goal, acreage was little in demand, and royalty went at near the proverbial song.

Two 9400-barrel Wilcox wells in the northwest quarter of the southeast quarter of Section 19-7-5 drilled in by Magnolia Petroleum Company and T. B. Slick approximately seven weeks ago, threw the area into the limelight for Mid-Continent operators, and on August 9 the second largest producer ever completed in Oklahoma brought it into the class of probable market hazards. Independent Oil & Gas Company's Youts 1, in the northwest of the northeast of the southeast, a direct east offset to T. B. Slick's phenomenal producer, flowed 19,920 barrels pinched in with 30 pounds of back pressure due to lack of sufficient pipe line capacity, producing from Wilcox sand at 4165-90 feet. In one hour on the day of completion production totaled 965 barrels, the state's best well since Sinclair Oil



and Gas Company's Hartley 21 of Garber deep sand fame in 1925. The oil tested 43.2 gravity, at 86 degrees at completion, but shortly turned warmer, and August 11 was reported running as high as 105 degrees temperature, foreshadowing the coming of salt water. While the oil was not cutting, large quantities of Wilcox sand was being produced with the oil as a result of the high pressure. The latter was a factor in many of the best Seminole area producers, especially at Earlsboro.

The coming of Independent's big well at such close quarters to the initial Wilcox wells resulted in sharp declines in the latter, but no more than common for this territory. As a matter of fact, all the faults of the big well fail to keep its record from marking St. Louis as a prolific producing region.

With 88 wells producing at St. Louis, many of which were late last week still not completed, production rose to 64,500 barrels, approximately 70 per cent of which was made by the five wells completed in the Wilcox. Pipe line capacity handling St. Louis production totaled 70,000 barrels, and lines building and planned following the advent of big production will run this to 90,000 barrels. The boom that has risen to big proportions at St. Louis within the past two months included at the close of last week 142 active locations, counting several wells that were being deepened, those drilling into pay and producing some oil, new locations staked, and rigs building. Such activity has placed this field ahead of Little River in development work, and St. Louis, as a possible leader of Little River in peak production, has no little following among Oklahoma operators.

Production from St. Louis of August 11 gauged 41,260 barrels from five Wilcox sand wells and 16,159 barrels from 25 Simpson sand-lime wells. The output from approximately 50 old shallow producers in the area amounts to 3000 barrels from Hunton and Viola limes.

Hunton and Viola lime production in the St. Louis field includes wells on production for several years in the immediate vicinity of St. Louis townsite and wells in the old South Maud field of northwestern 7-5, which have been on small production for the past five years.

The prolific Wilcox area of the field is destined to run directly south and probably to the east of the initial Wilcox discoveries made about the same time by Magnolia Petroleum Company and T. B. Slick in section 19-7-5. The erratic trends of the subsurface in the field is exemplified by the finding of salt water in the Wilcox at three different locations offsetting the 9400-barrel wells on the north. Two of these three Wilcox sand water wells have been plugged back to produce between 50 and 100 barrels in the Hunton lime, and the third, Magnolia Petroleum Company's Shipshewano 2, is being plugged back to a show passed up in Hunton lime.

St. Louis field is destined to get as thorough a development as any section in Greater Seminole territory, and, incidentally, has recently been considered as one of the Seminole fields, due to the nature of its pay formations and its close proximity to the Seminole pools. It is nine miles west of South Little River field.

Little River Restrictions Off; Production Jumps

(Continued from page 32)

The outstanding news of the week came with discovery of Wilcox sand production 3½ miles north of Wichita, Kansas, by Gypsy Oil Company, Marland Oil Company and Bu-Vi-Bar Oil Company, Wright 1, in the southeast corner of the north 60 acres of the southeast quarter of Section 12-26s-1w, Sedgwick County, was flowing 67½ barrels an hour Monday from Wilcox sand at 3367-68 feet. Production tested 43.2 gravity at 88 degrees and four days following completion the temperature of the crude had risen to 92 degrees, but was showing no water nor b s. Gypsy Oil Company owns a one-half interest, Marland Oil Company four-tenths and Bu-Vi-Bar Oil Company a one-tenth interest. The discoverers control approximately 3200 acres around the producer.

Wright 1 had the chat at 3025 feet, lime at 3040-3267 feet, black shale at 3267-3363 feet, and Wilcox sand at 3363 feet with the first oil pay coming at 3367 feet. Six-inch pipe was cemented at 3340 feet.

Mid-Continent Petroleum Corporation and Homaokla Oil Company's Nevins 1, in the southeast corner of Section 32-10-6, Searight pool, swabbed 55 barrels an hour from Wilcox sand Sunday at 4310-30 feet.

St. Louis field's sudden rise into leading importance in Oklahoma came with completion August 9 by Independent Oil & Gas Company of Youts 1, in the northwest of the northeast of the southeast of Section 19-7-5, for 21,460 barrels from Wilcox sand at 4165-90 feet, the last nine feet of which was oil pay. Due to terrific pressure and the looseness of the sand the well produced several tons of sand with the oil, but on the third day of production was reported not making water nor cutting, although temperature of the oil had risen to 105 degrees.

The northeast extension of Earlsboro field was adding new production during the past week, resulting from development around the Skelly Oil Company-Atlantic Refining Company's Cherry 1, and Superior Oil Corporation's Walker 1, semi-wildcat extensions more than two months ago. Burke-Greis et al's Wisner 1, in the southwest of the northeast of Section 6-9-6, flowed 145 barrels an hour late last week from Wilcox sand at 4353-67 feet after a 20-quart shot and caught fire, burning the rig down. Production had increased to 125 barrels an hour shortly after completion. Gypsy Oil Company's Sango 11, in Section 1-9-5, flowed 2522 barrels Sunday from Wilcox sand at 4389 feet after shooting with 10 quarts on bottom. Superior Oil Corporation's Sango 2, in the same section, swabbed 581 barrels in 12 hours following a 15-quart shot in sand at 4312 feet.

Indian Territory Illuminating Oil Company's Ritenour 1, wildcat test in the southeast of the southwest of the southwest of Section 22-8-5, topped Simpson sand Sunday at 4433 feet, and was drilling at 4464 feet Monday morning with no showing. Twin State Oil Company's Hayes 1, in the northwest of the northeast of the northeast of Section 8-8-6, Mission area, had a hole full of oil at 4252-56 feet in Wilcox sand Sunday night.

Gain in Few Districts Puts July Production Up

(Continued from page 28)

operators are rushing in all available equipment and at least 50 wells are expected to be drilling within 30 days. The field is a townlot and small-lease proposition and this fact will greatly aggravate the situation. The larger companies are adverse to throwing another flood of crude on an already overburdened market, but they are expected to throw caution to the winds and get their part of the oil, regardless of the consequences. The field resembles the Long Beach field in ownership, but the leases are considerably larger.

The discovery of a prolific light oil field in Santa Barbara County came as a surprise, but is regarded as the most important Northern California strike in years. The field is located about 10 miles west of Santa Barbara and proves the lower Miocene to be productive in a new area. Luton-Bell 1, the discovery well, flowed 2400 barrels on the initial test. The oil is 38 gravity and contains more than 40 per cent gasoline. While light oil fields in Santa Barbara County have not made an impressive showing in the past, the new Elwood field is expected to do much better. Production in the Long Beach field comes from the upper Miocene and there is no known reason why the lower part of the formation should not produce satisfactorily.

A 3500-barrel well in the Midway field came as a distinct surprise and proved that the first well completed several months ago in the deep zone was not a freak. The well is producing from several hundred feet of sand and practically assures the re-development of a large area in the southwestern part of the field. Shallow wells have produced sparingly in this part of the field for 15 years, the leases having been regarded as of little value. Three wells have been completed in the new zone and many locations made. On account of the size of the Midway field, the development of the sand may bring about many surprises. Drilling has centered on and near Sections 6, 7 and 8-32-23.

The excitement in other areas temporarily placed Long Beach in the background during the latter part of the month but it managed to give a good account of itself. Production during July broke all records since the re-development began, and although early predictions indicated the field would be on the downward trend at the end of the month, production still stood at the peak. About 35 wells were completed but new locations kept the total number of drilling operations above 190. Wells in the deep zone showed only a nominal decline, while the initial production compared favorably with that recorded in June. One well is drilling below 7650 feet and is still in the oil sand.

The Union Avenue area, near Bakersfield, showed some promise as a gas field, but failed to show much oil. Pacific Eastern's KCL 3 came in as a four and one-half million foot gas well, with only a trace of oil. The hole was plugged to 4416 feet for the final test.

The discovery of a black oil field in San Luis Obispo County by the Texas-Pacific Coal and Oil Company and the Barneberg interests is considered important from several angles. The discovery well is located on Section 25-32-14, and proves one of several small structures in the immediate area. Initial production was 400 barrels. An extensive drilling campaign is not anticipated.

Mountain States

Work in the Mountain States section was confined largely to the Salt Creek field in Wyoming, and the Kevin-Sunburst area in Montana. In both fields completions were largely of routine nature.

Eastern States

Pennsylvania led Eastern States in the amount of drilling and showed 168 completions with 146 producers. Ohio led in initial production with 3262 barrels from 50 producers. Kentucky reported 63 producers with 2872 barrels initial yield.

Grayback Pool Gets More Line

Wichita Falls, Texas—Sinclair Pipe Line Company and the Waggoner Refining Company are extending new lines to the Grayback pool in the South Vernon district to give some relief to the overproduction that has existed for the past month. Sinclair Pipe Line Company is reported to have contracted to run 2000 barrels daily from the Fain & Magaha Oil Corporation's properties. The Waggoner Refining Company is laying an eight-mile four-inch line from its Electra refinery to this pool to supplement present outlets.

Wilbarger County averaged 35,275 barrels daily during the past week, such being only a slight increase over the previous week's average because of the limited pipe line and storage facilities in the flush areas.

Prairie Oil & Gas Company uncovered a new shallow pool in northern Young County last week with the completion of Campbell 1, Section 1370, TE&L survey, making 57 barrels of oil during the first 18 hours on pump from sand at 977-79½ feet, with a surface elevation of 1210 feet.

Tulsa—Consolidated Utilities Gas Company is buying right-of-way for a 14-inch gas line to be laid from Wheeler County, Texas Panhandle, to Deer Creek, Oklahoma, where it will connect with two eight-inch gas lines of the company.

Wichita, Kansas, Wilcox Field

Tulsa.—Wichita, Kansas, is slated to have a Wilcox sand field almost in its outskirts following a strike August 9 by Bu-Vi-Bar Oil Company in Wright 1, in the southeast corner of the north 60 acres of the southeast quarter of Section 12-26-1w, Sedgwick County. The well flowed 60 barrels an hour from one foot of Wilcox pay topped at 3367 feet, flowing initially by heads of one minute intervals, but settling down shortly after completion to a regular flow.

Gravity of the oil tested 43.2 A. P. I. at 88 degrees.

Bu-Vi-Bar Company drilled the well on acreage held jointly by Gypsy Oil Company, Marland Production Company and the operators. Owners of the well hold approximately 3200 acres around the producer, which is located nearly in the center of the block. As a result of this control no close in drilling will follow except offsetting of the owners on adjoining fee land.

Derby Oil Company has a four-inch line to the well temporarily, and is running production to its refinery. Location of the discovery well is approximately three and one-half miles north of the city limits of Wichita.

Wright 1 made 190 barrels during the first three hours, then filled a 500-barrel tank in six hours and 10 minutes.

Nearest production to the discovery is the Augusta and Towanda fields, 18 miles east.

Tulsa—Champlin Refining Company, Bolene Refining Company and the Garber Refining Company, all operating in the Enid-Garber area of Western Oklahoma, are paying 10 cents per barrel premium on crude from the Roxana and Lovell fields of Logan County, Garber field and several other light oil producing areas of the western portion of the State. Payment of such premiums is further evidence of continued strengthening of the light oil market, regardless of present increases in production in sight.

Deep Coastal Producer Back After Cleaning

Houston—Pure Oil Company's Sweet Lake 4, at Sweet Lake, Cameron Parish, Louisiana, deepest producer in the Gulf Coast, with the depth of 5924 feet, is now flowing around 325 barrels net oil daily, together with about 80 per cent. water, following a workover job. Some weeks ago the well quit flowing, due to sand trouble, and the screen was subsequently cleaned by washing, after which the well was started to flowing by means of air pressure. After it was thus kicked off with air, it began flowing naturally, and the flow is now natural.

In this same field Pure Oil Company's Sweet Lake 5 continues to build up a reputation as an unusually good well to add to its reputation as the second deepest producer in the Gulf Coast. It is 5718 feet deep, and from that depth has produced around 275,000 barrels of oil in 74 days, an average of a little over 3700 barrels daily. It is still producing at approximately that rate. Last Sunday it flowed 3898 barrels of net oil, being on a one-inch and a seven-eighths-inch choke. Prior to its completion at the present depth, the well produced around 15,000 barrels from 5660 feet, making its total yield around 300,000 barrels.

Pure Oil Company recently started a new test in the Sweet Lake field, its Sweet Lake 6, which was below 400 feet early this week. Sweet Lake 3 has a fishing job at 6392 feet; and Sweet Lake 2 is shut down, waiting on orders.

Deep Well at Jennings Dropping Off

Houston.—Cockrell 1, new deep producer of E. F. Simms in the Jennings or Evangeline field, Acadia Parish, Louisiana, has dropped off in production and is now making around 100 barrels a day.

Clement 1, another deep test being drilled by E. F. Simms, and located 1600 feet north and a little east of Cockrell 1, has a total depth of 3800 feet, but late last week the pipe stuck at 3000 feet while reaming, and subsequently the derrick was pulled in. Efforts are now being made to remove the pipe.

Simms has a derrick up for the Clement 2, a direct offset to the Cockrell 1, and 100 feet east of it; and has made location for the Grace-Von Schoeler 1 at a point 100 feet north of Cockrell 1.

Operators Vote to Extend Shut Down Period

Tulsa, Okla.—Acreage holders in the Mission and Maud pools west of Bowlegs ratified the vote of a week ago to extend the drilling shutdown another 30 days to September 15, at a meeting with the umpire Tuesday afternoon.

A plan is being worked out by the umpire and conservation committee to extend proration work to cover all Oklahoma flush fields instead of handling the fields individually. They would limit Oklahoma to 700,000 barrels daily by prorating all flush fields according to their potential yield, thereby dividing curtailment of production exceeding this amount among the fields responsible for the over-production. This plan when worked out will be submitted to the Corporation Commission to be made an order.

The Osage Indian council plans calling a land sale at Pawhuska September 18, and meet the umpire and committee seeking aid in getting restrictions on recently sold land and wells removed by the Secretary of the Interior. The council stated its wishes for being allowed to come under the direction of the Corporation Commission and umpire rather than continue under the restrictions of last March, under which the leases were sold to operators. Such a program was acceptable to the umpire and committees.

Mining Congress Takes Up Depreciation Question

Washington, D. C.—Representatives of the oil producing industry this week joined with other branches of the mining trades, under the leadership of the American Mining Congress, in a conference with officials of the Internal Revenue Bureau in connection with a proposed study of mine depreciation and the standardization of depreciation rates in the mining industry.

The producers registered strong opposition to any plan for standardization or uniformity of depreciation in rates in wasting industries, such as mining, on the ground that it would be impracticable. They contended that depreciation should be determined, as it has been under all previous revenue acts, according to the peculiar conditions surrounding each mine as set forth in the revenue law. It was asserted that if the bureau considers a depreciation study to be necessary, it should be confined to records now held by the bureau based on prior income tax returns of the companies, as a new study and the furnishing of new records would be an unreasonable requirement on the industry.

"Depletion allowances to the mining industry are being considered by officials of the Internal Revenue Bureau, the Joint Congressional Committee on Internal Revenue Taxation and the American Mining Congress," officials of the organization stated following the meeting. "Attempt is being made to reach an agreement on a percentage plan of depletion. At the last session of Congress it was suggested that 15 per cent. of gross income be allowed as depletion for metal mines and 6 per cent. to coal mines. The proposal was deferred pending further investigation by these groups. In continuing its studies of the depletion question, the tax division of the American Mining Congress is securing data as to the amount expended in each mining State for prospecting and exploration work in developing new mines which cannot be deducted from income tax expense. These prospecting costs will be compared with depletion allowances deducted under the present law. The survey is expected to show that comparatively few prospecting operations prove successful and to justify the proposed percentage plan of depletion as a necessary measure of conservation and advancement in mining. Effort is being made to have these studies and investigations completed for report to congress at the next session."

Shreveport, La.—R. O. Roy's Jesse Fuller 1, Section 6-13n-13w, De Soto Parish, has been completed as a 20,000,000-foot gas well in the Woodbine at 2827 feet, and is closed in. The well is in virgin territory, about 10 miles northwest of the Bull Bayou field. Roy controls between 7500 and 10,000 acres to the south and east of his well.

Talk Plans for Curbing Santa Fe Springs as Rush Continues

Long Beach is still in the midst of a slump which may bring daily production down; danger seen of termination of proration at Ventura

By BRAD MILLS
Staff Representative

LOS ANGELES.—Maintaining the furious pace set immediately after discovery of the new deep zone, locations in the Santa Fe Springs field have passed the hundred mark in less than three weeks, with every indication that the figure will be greatly increased during the next two weeks. Rigs are springing up in every part of the field and steam shovels, concrete mixers, surveying crews and idle drillers are being pressed into service on every hand to aid in the race for a zone which the operators know almost nothing about. The area surrounding the Wilshire well first came in for the greatest activity, but since the first deep producer is not located in the center of the field, leaseholders in even the remote sections are becoming excited and joining in the free-for-all. Rarely has a discovery about which so little is known created such a flurry.

The Wilshire Oil Company is still withholding all information concerning the discovery well. Even the largest companies have no positive evidence of the thickness of the new zone, the approximate shutoff depths or the tubing and casing pressures. The size of the well is not as important as the thickness of the zone, since it is possible to complete a comparatively large well in a very thin virgin sand.

Proration Plan Talked

Many rumors have been circulated to the effect that plans have been made to curtail drilling or prorate production when it is developed. As wise as either of these moves would be, little has been done in either direction. The field is a combination small-lease and town-lot affair, and though not as complex as the Long Beach field, efforts to curb drilling would be met with severe opposition. As disastrous as it would be for all concerned, the only sure way to check drilling will be to complete a number of very small wells or outright failures. There is the chance that the zone will not prove especially productive, at least over a large area. The possibility that the first wells will get the bulk of production is having and will have a two-fold effect. It is the chief cause of the present spirited race, and likewise may serve to check additional drilling after the first sharp production decline.

Long Beach Still Slumps

Long Beach is still in the midst of a slump which may carry production considerably below 200,000 barrels, but with 185 drilling wells, it is dangerous to become too optimistic concerning the possibility of a long series of declines. Six wells were completed during the week, with the very puny average initial production of 700 barrels—one of the lowest averages of the year. The field has "possumed" once or twice before, however, only to snap back with wells as large as those completed early in the year. The gas pressure is still good and there is ample reason to believe that last week's wells were not representative completions. Production from the deep zone has declined to 138,600 barrels from 723 wells. Water is causing some trouble in parts of the field, but the condition is far from alarming. The water bugaboo was both discussed and feared several months ago, and is little worse now than then. One large well near the edge of the field was producing about 35 per cent. water for several weeks, only to start yielding nearly three-fourths water. At its best, it was pretty wet, and there is a chance that something went wrong mechanically.

Shell successfully completed Nicholson 5 at 7805 feet, making it by far the deepest well ever finished in the field. Initial production was 1500 barrels of 29 gravity oil. Completion of this well at such a depth is a real achievement and only the highest skill and best equipment could stand such a test. The drill cut upward of 5000 feet of oil sand, probably a world's record in this respect. The 5¾-inch casing was cemented at 6835 feet, with 2½-inch upset tubing, including 1008 feet of three-inch 80M screen liner on bottom, landed at 7787 feet.

New Long Beach Wells

Completions during the week were:

California-Eastern Oil Company, Campbell 1; initial production 400 barrels, total depth 6941 feet, gravity 27.5, cut .14 per cent.

California-Eastern Oil Company, Marine 26; initial production 508 barrels, total depth 6702 feet, gravity 31.0, cut .16 per cent.

Rio Grande Oil Company, Municipal A-3; initial production 900 barrels; total depth 7093 feet, gravity 30.9, cut 28.0 per cent.

Shell Company, Nicholson 5; initial production 1500 barrels, total depth 7805 feet, gravity 29.0, cut 7.5 per cent.

Shell Company, Stratton 3; initial production 785 barrels, total depth 7350 feet, gravity 25.0, cut 20.0 per cent.

McKeon Drilling Company, Thorn 1; initial production 100 barrels, total depth 6424 (plugged to 5845) feet, gravity 29.0, cut 0.8 per cent.

Proration at Ventura in Doubt

Friction concerning the proration in the Ventura field has arisen and there is danger of the work, accomplished by the various conservation committees, being lost entirely. One operator is not exactly satisfied with the clause requiring that new wells be partially shut in after a 30-day test, and the result may be the abrogation of the agreement reached several months ago. According to the terms of the agreement, conservation would remain in effect only as long as all of the operators were in accord. One very large well has already produced about six weeks, but has not been shut in. By producing the field at capacity, production would jump about 10,000 barrels and gas wastage would again become a serious problem.

The possibility of a deep test in the Inglewood field looms, partially as the result of the discovery at Santa Fe Springs and partially due to the natural desire of a large operator to enhance the value of his property. No definite announcement has been made, however, and such a test may not be made at this time. Inglewood has long been feared as a large potential producer in the deep zones and a test at this time would not be welcomed.

Abandoning the idea of production at the present depth, W. W. Stabler is drilling deeper from 2632 feet in Tejon 1, Section 23-32-27, a promising test of the Comanche Point district. After the hole was bailed to bottom, it failed to make the necessary showing, developing into nothing more than a wildcat which would not produce. Stabler succeeded in pulling the liner, having already received approval of the 10-inch water shutoff. The Comanche Point area is fairly well in line with the producing fields along the east side of San Joaquin Valley and contains about the same formations. Shales cropping out near the supposed structure produce in the Kern River district. Stabler's wildcat test showed both oil and gas at different depths.

Fruitvale Locations

The Pacific Eastern Production Company is anxious to know more of the

new Fruitvale field, having located two wells on Section 22-29-27. The three wells already completed were located on the northwest quarter of Section 21. Each came in with an almost identical initial production and did not offer a definite clue as to the size or extent of the field. Number 3 seemed to be slightly higher on the structure than either No. 1 or No. 2, but its action failed to make a better impression than either of the other producers. One of the new locations is about one-fourth mile east of the discovery well and the other three-eighths of a mile southeast of the same well. Number 1, which was chosen by the company as a deep test of the field, is drilling at 4875 feet, with the formation running to sand and shale. An occasional streak of oil sand is encountered, but nothing of a commercial nature has been cut below 4200 feet. Both Nos. 1 and 2 are pumping at approximately their initial rate, or about 180 barrels.

Rincon

The Rincon field, which started off in a blaze of excitement, has failed to live up to expectations and is fast becoming "just another field." It is too early to condemn either the upper sand or the theory that a lower zone will be found, but developments place a strong element of doubt on both. Like every other new field, Rincon has been doubted by the conservative element.

Richfield Oil Company has acquired the Miley Oil Company's Hobson 1, now temporarily shut down at 6398 feet and will complete the well as soon as necessary repairs are made. Pan American Petroleum Corporation has plugged back to 2800 feet in Hobson 1, originally drilled to 5680 feet, and will test the upper zone in preference to pioneering further at this time. This plugging back leaves the opinion that the company is not optimistic concerning the possibility of a very deep producing sand. Standard Oil Company completed two producers in the field—Nos. 1 and 5. The former was completed with an initial production of 550 barrels from 3726 feet and the latter flowed 1100 barrels from 3800 feet. Number 5 showed a high percentage of water but cleaned up slightly. The 3400-3800-foot zone seems the most popular at this time, although the first successful body of sand just below 3000 feet is still producing a good percentage of the total production. The top sand which caused the first excitement has never proved a success. Pan American Petroleum Company worried along with it for months, finally having to deepen to the 3100-foot zone. Chanslor-Canfield Midway Oil Company also failed to get commercial prduction around 2600 feet but got average wells below 3000 feet. In its present status, Rincon looks like a pumping field, and not much more.

Elwood Field

Weathering a mild storm of doubt, Luton-Bell 1, the discovery well of the Elwood field, near Santa Barbara, is still flowing 2300 barrels, with both the casing and tubing pressures remaining firm at 455 and 1150 pounds, respectively. Due to the exceedingly high pressure, a gasket between the casing and tubing blew out last week, allowing the well to flow at the rate of 200 barrels an hour before it was killed with hematite. After repairs were made, production settled to almost exactly its former rate. Barnsdall Oil Company and Rio Grande Oil Company, the discoverers and principal owners of the field, are ready to start drilling the second well to conform with the terms of the lease. Geologists are divided on the value of the discovery, but all admit Luton-Bell 1 is an unusual light oil producer. The past history of light oil producers in the immediate area has been a good production for a very short time and then lots of water and a little oil. This usual breaking in of water has necessarily caused a skeptical attitude. The fact that the Elwood field is producing from an entirely different zone than Goleta is much in its favor. There is little reason, apparently, why the lower Miocene should not produce satisfactorily. Some contend that the discovery well is entirely out of line with the district and certainly must be a freak, holding that additional drilling will prove that small wells will be the rule, but these arguments may prove to be entirely too conservative.

Wildcats Retarded

Wildcatting in California is being noticeably affected by the discovery of a deep sand in the Santa Fe Springs field. An occasional well is being shut down and the spudding of several others has been postponed until something more is learned of the Santa Fe Springs situation. The rise of the Long Beach field retarded wildcatting some and the newest discovery is acting as a still greater barrier. It is not to be construed, however, that drilling operations in unproven areas will dwindle away at a rapid rate. Wells that have had encouraging showings will continue. Increased production and the likelihood that a new flood will soon be coming on has taken the edge off of leasing in wildcat territory. In anticipation of a drop at Long Beach, even the larger companies were quietly acquiring additional acreage in several counties, particularly Santa Barbara and Kern, where important discoveries have sent several old theories to the discard. Leasing is expected to continue with less zeal than during the spring and early summer months. Already prices have dropped in districts where spirited bidding has been under way for more than six months. The larger companies have confined their activities chiefly within striking distance of the proven fields in Kern County, and are expected to be even more conservative in the immediate future.

The settled fields of the Los Angeles Basin area are a sorely neglected lot these days. At least two of these older fields were being groomed for deep tests prior to the discovery at Santa Fe Springs, but these tests probably will be postponed for some time. If the new zone at Santa Fe Springs does not meet expectations, however, there is the possibility that almost every field in the basin will be explored for new sands. The newest discovery has created a lot of imaginary deep sands in the minds of operators who are worrying along with small wells at nominal depths and the fields that have not come in for deep drilling may yet get their chance. The deep zone at Santa Fe Springs proves that the old shallow sands do not necessarily hold the key to the situation in the Los Angeles Basin. Huntington Beach has long been regarded favorably by many geologists, who believe that another deep sand exists. The rather costly experience in the drilling orgy of 18 months ago has put a damper on further exploration, however. There was a mad rush for the deep sand, but many derricks came down after it was evident that the new zone did not warrant the expenditure of so much money on a failing gas pressure.

Seal Beach Deep Test

The deep zone at Seal Beach will get another test in a few days, when the Marland Oil Company will drill out the cement in Selover 12, now standing at about 7000 feet. The company fished for several weeks to clear the hole and has finally succeeded in cementing a string of casing to test the bottom of the zone which has failed to show much since it was discovered more than six months ago. Pan American Petroleum Company Naples 2 was completed in the bottom of the zone and failed to make better than 100 barrels. Marland Oil Company's Selover 12 seems to hold the key to the situation right now, and the results will be watched with interest. This well is located in the Alamitos Heights or townlot area and will need to be a good one to attract a wide following, due to the excitement in a more critical area.

Despite the excitement in the fields of Southern California, the old Midway field is attracting wide attention, due to the recent completion of three good wells in a new deep zone. The latest completion, Chanslor-Canfield Midway Oil Company's No. 4, Section 7-32-23, has settled to 2300 barrels and promises to show only a minimum decline over a period of several months. Before settling to a steady figure, the well actually flowed at times at the rate of 200 barrels per hour. Such a producer at only 3003 feet must not be ignored and indicates that a large production in the southwestern part of the field is possible. The gradual rise and dip of the producing formations in certain parts of the Midway field make it difficult to estimate the probable extent of the new zone. The old shallow production was fairly well confined to

(Continued on page 58)

Texas Well Average Shows Increase Over Two-Year Period

Except for the flush areas of West Texas, however, the average is lower, as many small wells in older fields are kept producing

Texas Well Averages by Fields

The figures for Panhandle, West, North, Central-West and East-Central Texas show producing wells and daily production during June. Those for Southwest Texas, South-Central, and Gulf Coast show daily production during July, and the number of producing wells at the end of that month.

SUMMARY

	No. wells producing now	No. wells producing June, 1926	Daily av. prod. now	Daily av. prod. in June, 1926	Well av. per day in bbls.	Well av. in June, 1926
West Texas	1,579	234	310,903	35,711	196.89	152.61
Panhandle	1,428	184	67,655	45,910	47.44	249.51
North Texas	13,516	11,383	90,370	89,825	6.69	7.89
Central-West	7,587	5,404	44,735	41,540	5.89	7.68
East-Central	1,439	1,696	21,466	51,905	14.92	30.60
South-Central	1,509	1,239	17,183	27,306	11.39	22.03
Southwest Texas	1,864	1,353	9,939	10,463	5.33	7.73
Tex. Gulf Coast	2,454	2,458	105,535	92,829	43.00	37.76
Total	31,376	23,951	667,786	395,489	21.28	16.51

WEST TEXAS DISTRICT

Fields—	No. Wells	Daily average production for field	Well average per day in bbls.
Winkler County	230	159,580	*694
Crane County	268	54,755	204
Pecos County	196	55,090	*281
Reagan County	210	17,680	84
Upton County	297	12,365	42
Howard County	154	4,035	*26
Mitchell County	141	2,930	21
Crockett County	41	2,075	51
Jones County	26	1,720	66
Fisher County	3	395	132
Loving County	3	145	48
Runnels County	2	75	37
Scurry County	5	40	8
Ector County	2	15	7
Garza County	1	3	3
Pecos County	196	55,090	281
Total	1,579	310,903	197

TEXAS PANHANDLE

Hutchinson County	987	39,630	40
Gray County	238	20,245	85
Carson County	165	6,650	40
Wheeler County	34	955	28
Moore County	3	165	55
Potter County	1	10	10
Total	1,428	67,655	47

NORTH TEXAS DISTRICT

Wichita County	7,352	26,865	3.65
Wilbarger County	767	20,690	26.98
Archer County	3,143	20,685	6.58
Montague County	585	8,665	14.81
Young County	994	7,945	7.19
Cooke County	172	2,630	15.29
Jack County	97	1,345	13.87
Throckmorton County	30	915	30.50
Clay County	355	520	1.46
Baylor County	21	110	5.24
Total	13,516	90,370	6.69

(*) Production partially pinched.

HOUSTON.—A survey of all the oil wells in Texas, based partly on July and partly on June figures—figures which are a fair representation of now existing conditions—shows a total of 31,376 producing wells in the state. This represents a steady and large increase in the number of producers during the past several years. In the past two years the increase has been nearly 50 per cent., the records for June, 1926, showing 23,951 producing wells in the state.

31,376 Wells in Texas

The 31,376 wells now on production are yielding oil at the rate of 667,786 barrels a day, according to the survey; this represents a daily average per well of 21.28 barrels. In June two years ago the well average was only 16.51 barrels, the daily production of the state then being 395,489 barrels.

The greater production per well as compared with previous dates, is not, however, a fair indication of the real situation—due to the comparatively large number of wells in West Texas.

As a matter of fact, the average daily production per well is lower now than at previous dates throughout the past two years for all sections of the state with the exception of West Texas and the Texas Gulf Coast.

West Texas Average Higher

In West Texas the average daily production per well is now 196.89 barrels, against 152.61 two years before; and in the Gulf Coast it is 43 barrels as compared with 37.76. The greatest decline, in the meantime, was in the Panhandle, where in June of 1926, at the outset of a period of flush production the average per well was 249.51 barrels daily from 184 wells, and where the present well average is 47.44 barrels daily from 1428 wells.

In view of the conditions in West Texas and the Panhandle during the past two years and at present—conditions which have been changing and abnormal, those sections should be omitted in an analysis of conditions in the state as a whole now as compared with two years ago. For in spite of the fact that the Panhandle and West Texas are now producing over one-half of the total output of the state, those sections have only about 10 per cent. of the wells; and in June, 1926, the same sections were producing 20

per cent. of the state's output from only two per cent. of the wells.

Older Fields Low

For the sake of a comparison, therefore, it would be valuable to consider separately those sections outside West Texas and the Panhandle—those sections which have had settled production during the past two years, where more than 90 per cent. of the wells of the state are located.

In those sections, exclusive of West Texas and the Panhandle, in June, 1926, there were 23,533 producing wells with a daily output of 313,868 barrels—a well average of 13.33 barrels. At present those same sections have 28,369 wells which are producing at the average rate of 289,228 barrels daily, or only 10.19 barrels per well.

In some sections the production per well is particularly low—lower than at any previous times. North, Central-West and Southwest Texas, considered as sections, have well averages of 6.69, 5.89 and 5.33 barrels daily, respectively. In the accompanying tables there are numerous examples of small wells which some of the operators are nursing along in the hope of better prices. In North Texas there are 355 wells in Clay County with an average daily yield of 1.46 barrels. In Central-West Texas 1680 wells in Callahan County have an average daily output of 2.12 barrels each, and 167 wells in Palo Pinto County produce at the average rate of 2.72 barrels daily. In the South-Central fault district the Minerva-Rockdale and Brenham fields have daily well averages of 1.41 and 2.42 barrels respectively. In the Southwest Texas district, 91 wells in the Charco-Redondo field produce less than one barrel each per day, on the average; and 1098 wells in Bexar County and the Somerset field have less than two barrels daily output each. In the Texas Gulf Coast the lowest yield per well is at Saratoga, where 232 wells produce at the average rate of 4.48 barrels daily; but the records are not much higher at Humble and Batson, the former having 237 wells yielding at the rate of 6.11 barrels daily, and the latter 224 wells with an average daily output of 6.29 barrels.

Hendrick Average High

The highest yield per well in the entire state now is in the Hendrick pool, Winkler County. In that field 230 wells have an average daily output of 694 barrels each, and the production is partially pinched. Pecos County, where production is partially pinched, likewise, has a per-well output of 281 barrels from 196 wells; and Crane County wells, numbering 268, are yielding 204 barrels daily each on the average.

Outside of West Texas the highest per-well production is in the Pierce Junction field in the Gulf Coast, 53 wells there producing over 12,000 barrels a day, an average of around 227 barrels daily per well.

Texas Well Average by Fields

(Continued)

	No. Wells	Daily average production for field	Well average per day in bbls.
CENTRAL WEST TEXAS DISTRICT			
Brown County	1,735	12,460	7.18
Shackelford County	1,211	10,480	8.65
Stephens County	1,270	7,035	5.54
Ranger-Eastland County	834	6,015	7.21
Callahan County	1,680	3,555	2.12
Coleman County	270	3,365	12.46
Desdemona-Comanche Co.	420	1,370	3.26
Palo Pinto County	167	455	2.72
Total	7,587	44,735	5.89
EAST CENTRAL TEXAS DISTRICT			
Corsicana-Powell	689	10,739	15.59
Mexia	421	6,956	16.52
Wortham	177	1,742	9.84
Nigger Creek	40	576	14.40
Richland	63	551	8.75
Currie	37	457	12.35
Cedar Creek	12	445	37.08
Total	1,439	21,466	14.92
SOUTH CENTRAL FAULT DISTRICT			
Brenham	31	75	2.42
Dale	35	985	28.14
Luling	563	13,960	24.79
Lytton Springs	290	1,303	4.49
Minerva-Rockdale	584	825	1.41
Thrall-Williamson County	6	35	5.83
Total	1,509	17,183	11.38
SOUTHWEST TEXAS			
Albercas	16	1,556	97.25
Aviator	166	1,466	8.83
Carolina-Texas	4	19	4.75
Charco-Redondo	91	70	.76
Cole-Bruni	10	1,231	123.10
Henne-Winch-Farris	103	585	5.68
Kohler	3	53	17.66
Mid-Ojuelos	74	338	4.57
Mirando-Valley	14	80	5.71
Randado	145	1,512	10.42
Schott-Mirando City	118	810	6.86
Somerset & Bexar Counties	1,098	2,100	1.91
Wolcott	22	119	5.40
Total	1,864	9,939	5.33
TEXAS GULF COAST			
Allen Dome	2	43	21.50
Barbers Hill	11	680	61.81
Batson	224	1,410	6.29
Big Creek	30	3,002	10.00
Blue Ridge	66	6,487	98.28
Boling	80	1,976	24.70
Damon Mound	43	818	19.02
Dayton (north)	8	520	65.00
Goose Creek	213	6,829	32.06
High Island	7	362	51.71
Hull	330	10,648	32.26
Humble	237	1,450	6.11
Kingsville	9	350	38.88
Markham	7	269	38.43
Nash	16	1,173	73.31
Orange	110	3,878	35.25
Orchard	2	10	5.00
Pierce Junction	53	12,052	227.39
Saratoga	232	1,040	4.48
Sour Lake	302	3,358	11.11
South Dayton	8	182	22.75
South Liberty	68	3,797	55.84
Sugarland	2	183	91.50
Spindle Top	305	36,839	120.78
W. Columbia	89	8,179	91.89
Total	2,454	105,535	43.00

Extension Tube Adds Efficiency To Foam Equipment

Standard Oil Company of California gives industry benefit of its extension research conducted in fighting fire in oil tanks

By BRAD MILLS
Staff Representative

THOUGH perfected more than a year ago by the Standard Oil Company of California, the asbestos extension tube still stands as one of the most efficient contributions to fire extinguishing equipment, as applied to oil tank fires. This apparatus consists of a flexible asbestos tube and is attached to the gooseneck end of the towers or portable mixers used for carrying foam over the top of a burning tank. It is the result of a series of experiments conducted by the company after a 115-foot diameter tank of burning distillate at El Segundo defied all efforts of a trained crew and burned itself out.

Some of the events leading up to the development of the asbestos extension tube follow:

Soon after the tank of distillate burst into flames, the foam system was brought into action. The fire seemed to die down after the foam was applied, with every indication that it would soon be out. The blanket of foam, after a fairly good smothering effect, seemed to lose its effectiveness. It was observed that the mixing box in the tank had been partially tipped over when the tank roof blew off, and it was immediately suspected that the two solutions were not working properly together. Portable mixing tubes were brought into play after the solutions were almost completely shut off from the regular mixing box. The foam from these portable mixing tubes also checked the fire for a time, but the blaze continued, although about three and one-half feet of foam blanketed the tank.

The company was extremely dissatisfied with the progress made against the El Segundo fire and decided to conduct an extensive investigation as to the cause of the failure. Since it was impossible to account for the failure merely from observation, the company used what remained of the tank for making what it termed "full scale tests." A small amount of oil was placed in the tank, the mixing box placed about 20 feet above the oil and tilted at about the same angle as it had assumed during the fire. The fire was extinguished after an hour's battle, but it had required 33,000 gallons of each foam solution to turn the trick.

In the second test, the mixing box was placed only three feet above the oil level. The fire was extinguished in 13 minutes with a total of 8400 gallons of each solution, or only about 25 per cent. as much as was required in the previous experiment. Company experts saw that they were on the right road, since dropping the mixing box almost to the oil level had produced amazing results. "This confirmed suspicions that the difficulty in the original fire and in the first test, had been that the foam dropping a long way onto the oil surface splashed so violently into the oil that it became oil-saturated, and thus lost most of its effectiveness."

The company knew that fires might occur in tanks where the oil level would be 10 or even 20 feet below the top of the tank, and realized that some arrangement should be perfected to gently pour the foam onto the oil, rather than let it splash as in the El Segundo fire. Clumsy baffles or floats under the mixing boxes were suggested, but it was found that the expense of equipping the many tanks with such a device would be very heavy.

Company engineers finally agreed upon some form of an extension tube which would be placed on the end of the portable mixers. It took some time to design a hose flexible enough to coil up compactly and strong enough to stand the initial rush of the solutions. The asbestos extension tube was the result of a series of experiments, during which strength, flexibility and general design were studied. Wire-inserted asbestos cloth is used. A mixing basket is placed at the bottom of the tube, allowing the solution to gently roll out over the burning oil without danger of saturation.

In the final tests with the new equipment, the fire was completely extinguished with only 3300 gallons of each solution, or about one-tenth of the amount necessary to extinguish a similar fire with the mixing box 20 feet above the oil surface, and less than half the amount required to extinguish the fire when the mixing box was only three feet above the oil. The rate of delivery of the solution was one-third of the rate that had been required in former tests.

The Company has compiled complete directions for using the asbestos tube in connection with the portable foam tower. Each specific direction is illustrated with an actual photograph, a total of 12 operations being necessary to place the asbestos extension tube and portable foam tower in action against the fire.

The directions as issued by the company follow:

"NOTE: Twelve trained men can handle tower, but under fire conditions at least 20 men should be used. Men should wear cotton gloves. Speed in preparing and erecting tower is not necessary, but it is essential that no time between the introduction of the asbestos to the fire and the arrival of the foam into the bowl. Bowl should be within a foot or two of surface, but *must not be in the oil.* Allowance must be made for expansion of fuel and crude oil when foam is applied.

"1. At any point near the fire where work can be done in comfort, lay tower flat on its back with gooseneck vertical and the three poles extending beyond gooseneck end of tower. Attach the three guy cables but keep these wound on spools. With knife or tinsnips cut eff top of asbestos tube at a distance from the bottom of bowl *not greater than the tank outage.*

"2. Without cutting the four lengthwise cables inside the tube, cut away about 12 inches more of the asbestos cloth, leaving the cables extending about a foot beyond the end of the cloth. Remove clamp from end of gooseneck; draw a few inches of the asbestoc tube over the mouth of the gooseneck.

"3. After fastening cables to lugs replace clamps.

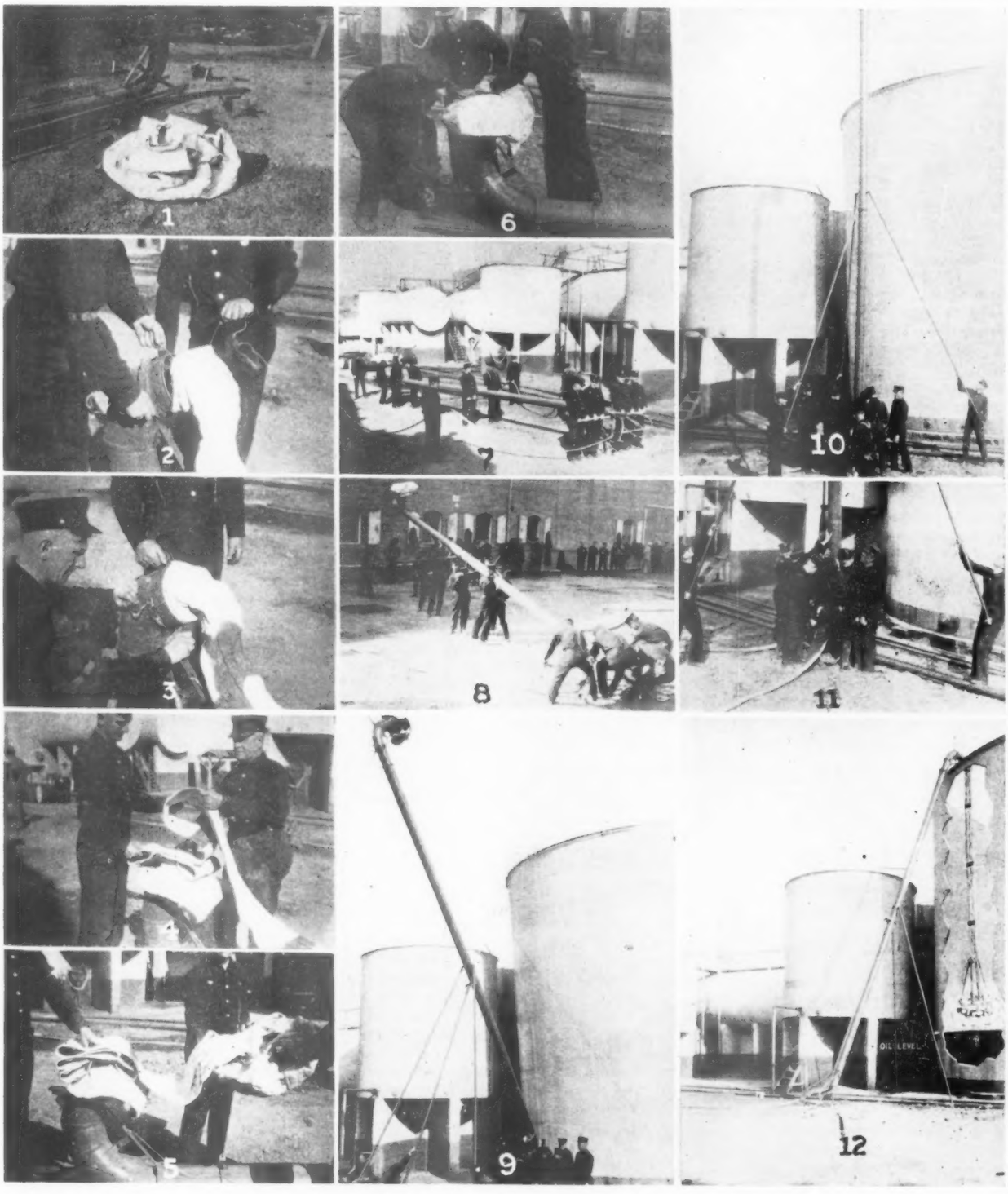
"4. Fold asbestos tube on gooseneck, using care to cover all projections with first folds (this to prevent straps and the rim of bowl from becoming caught.)

"5. Tuck in all straps and rim of bowl before placing bowl on top of folds.

"6. Hold folded tube snugly on end of gooseneck by means of cable drawn tightly over top and then attached to pin in release device. See that cotter-pin holding release plug is in such position that a pull on the cable attached to cotter-pin will allow the asbestos tube to fall free—the release cable is stretched taut and tied to the base of the tower.

"7. At the nearest set of hydrants on the foam system, install portable meters* so that solutions can be proportioned equally to the tower. Attach a 2½-inch hose line to each of the connections at the base of the tower; one hose line being run from the acid solution hydrant, the other from the soda solution hydrant. No more hose should be connected than is necessary to reach from the hydrant to the base of the tank where tower will be erected. The tower should be carried with base foremost and poles extending backward beyond the gooseneck. One hose line is trailed on each side; kept out of the way of the tower carriers by the hoseman. One man assigned to each of the three guy cables should carry the cable which should be extended into position as soon

Steps in Laying Foam on Burning Oil Without Splash



Details of these operations are given in the text.

as the tank is reached. The tower should be laid flat on its back with the base a few feet from the shell of the tank and inspected to see that release cable is clear and that all is in readiness for erection.

"8. All of the men except the three carrying the guy cables should assist in raising the gooseneck end of the tower and steadying the base. When the gooseneck is raised too high for the end of the men on the reach, the three poles attached to the tower should be used, two men on each pole.

"9. The center one of these poles should be kept directly underneath the tower and the two side poles a few feet on each side of the center pole. The side guy cables should be brought as far to each side as possible, these cables being left slack with only sufficient tension to prevent the tower from leaning toward the side.

"10. The center cable should remain slack until the vertical position is reached when the men assigned to this should extend the cable to its full length away from the tank and prepare to hold back the

tower so that it may be lowered gently to the tank.

"1. When the tower is in the vertical position, it should be temporarily held and if necessary the base should be moved forward or back to permit the gooseneck to come in proper position on the tank rim when the tower is leaned against the tank. If the tower has not been erected from a position normal to the tank, it should be rotated to this position when held vertical. While the tower is still in the vertical position with the drain valve in the base open, the solutions should be turned on until hose lines are filled and foam flows from drain valve. Solutions should then be shut off and drain valve closed after the tower is bled empty.

"12. The tower should then be lowered gently against the shell of the tank with gooseneck snug against the tank rim, *the asbestos tube promptly released, and the solutions immediately turned on.* The tube will become damaged by the heat if allowed to remain in the fire before solutions are turned on. The two solutions should be proportioned equally, using about 200 g.p.m. of each solution if this rate is available.

NOTE: Men should be assigned to positions as follows:

1 to each solution hydrant	= 2
2 to each side guy cable	= 4
3 to center guy cable	= 3
2 to each pole	= 6
4 to base of tower (2 of these will operate valves and one the release device)	= 4
Total	19

"Ten of these men will carry tower and three will carry guy cables. The remainder can help carry the hose, which requires about one man for each 25 feet of each hose line."

The Standard Oil Company's policy of allowing other oil companies to use their fire extinguishing processes free of charge applies to the asbestos extension tube. A complete set of drawings and permission to build the equipment described in this article will be furnished upon application to H. H. Hall, Chief Engineer, San Francisco.

*Not necessary where total flow rate is not in excess of 250 g.p.m. of each solution.

Hear Arguments on Teapot Dome Interest

Cheyenne, Wyo. — Arguments were heard before Judge T. Blake Kennedy, U. S. District court, here August 3, on a motion asking approximately $750,000 in interest claimed by the government on money alleged to be owed by Mammoth Oil Company on crude petroleum taken from the Teapot Dome Naval Reserve. Counsel for the Sinclair interests and government counsel agreed that $2,294,597.74 is the principal sum due the government, but counsel for the Sinclair interests maintained that the government is not entitled to interest. The Mammoth Oil Company was not represented by counsel at the hearing, but filed briefs. The government was represented by Atlee Pomerene, special counsel.

Magnolia Pipe Line Runs Show Increase in July

Dallas, Texas.—Magnolia Pipe Line Company's crude runs from fields in Oklahoma, Texas, Arkansas, Louisiana, and Kansas averaged 112,732 barrels daily during July, or an increase of 9602 barrels over the previous month. These runs represent crude produced and purchased by Magnolia Petroleum Company, and does not include oil handled on common carrier basis for other companies, or that stored under contract in the field. Oklahoma continues to lead as the largest source of crude for Magnolia, and daily pipe line runs from this state averaged 58,183 barrels during July.

Oil handled by Magnolia Pipe Line Company in Oklahoma has exceeded trunk line facilities for the past ten months, and during this period crude stocks in the former state have been increased by 2,595,821 barrels, while during July stocks were increased at rate of 5499 barrels daily. Total stocks in Oklahoma at close of July were reported as being 8,658,532 barrels. The Greater Seminole district is the principal source of this heavy production and pipe line movement.

Magnolia's pipe line runs from fields in Texas averaged 45,144 barrels daily during July, or an increase of 5257 barrels above the daily average maintained in June. Crane County, West Texas district, is Magnolia's largest crude source in Texas, with more than 7000 barrels daily coming from The Texas Company's (was Landreth) strip lease on contract over balance of this year.

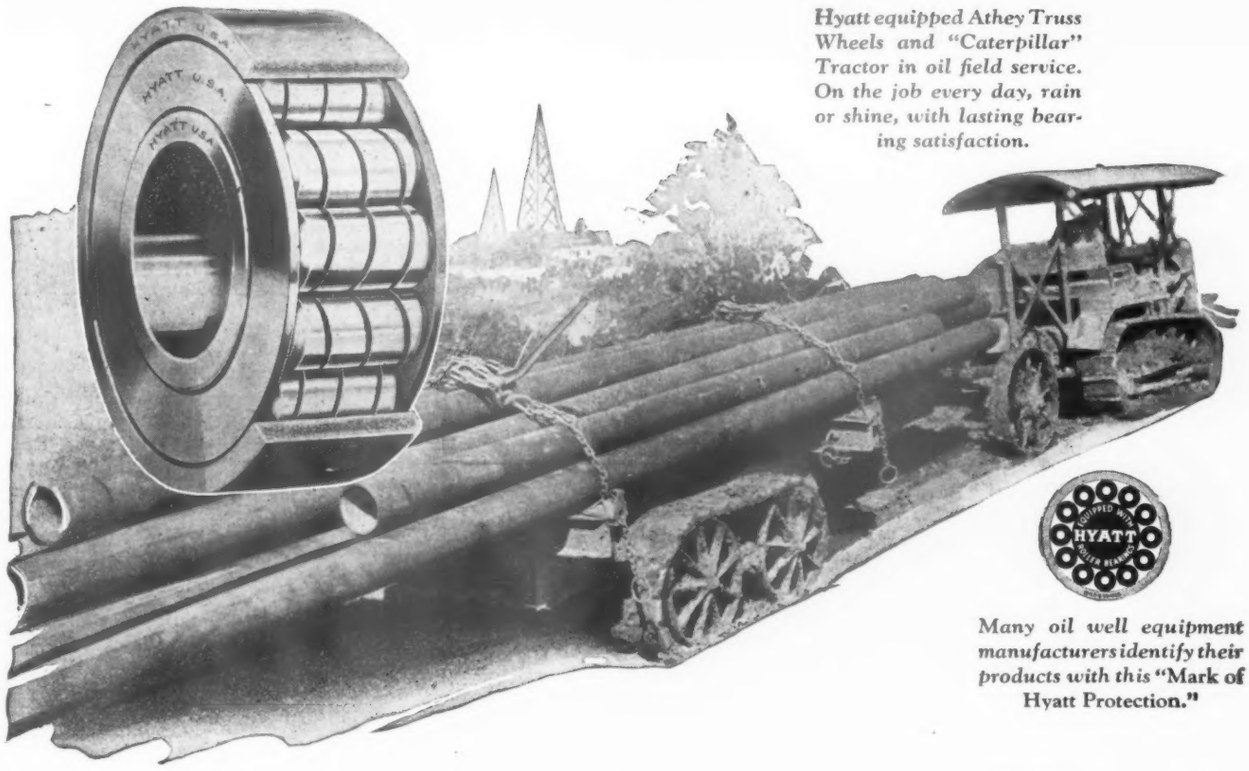
Having a large surplus of crude, Magnolia shipped 877,015 barrels of oil from its Beaumont terminals via tankers to Atlantic Coast and foreign refineries during July. Tanker shipments of refined products during July amounted to 58,846,079 gallons, representing a slight decrease compared to the previous month, while fuel oil movements via water dropped from 13,556,859 gallons in June to 8,068,484 gallons in July.

Total crude runs made by Magnolia Pipe Line Company, exclusive of common carrier business, from fields in Oklahoma, Texas, Arkansas, Louisiana and Kansas during June and July, 1928, follow:

	June Totals	July Totals
Wewoka-Earlsboro	763,096	945,586
Healdton	234,904	242,132
Hewitt-Graham	185,201	173,124
Seminole	170,823	155,820
Cushing	122,211	128,159
Yale	50,907	51,527
Duncan	42,697	43,935
Augusta (Kansas)	37,471	38,258
Cement		16,358
Walters-Beaver Creek	6,333	8,700
Burbank	84	89
Total, Oklahoma & Kansas	1,613,727	1,803,688
Crane County	265,524	402,317
Luling	349,031	353,509
Mirando	81,673	117,110
Panhandle District	113,209	112,361
Electra	100,264	101,193
Burkburnett	72,995	70,277
Lytton Springs-Lockhart	53,072	53,808
Winkler County		37,967
Archer County	29,707	29,188
Howard County	28,144	28,023
Mexia-Wortham	28,033	27,298
Desdemona-Comanche County	20,087	19,549
Corsicana-Powell	13,518	13,034
Ranger-Olden	9,716	10,301
Corsicana (Heavy)	9,294	9,100
Stephens County	7,245	8,233
Petrolia-Clay County	2,831	3,150
Panola County	1,169	1,194
Thrall-Williamson County	1,075	995
Spindletop-Gulf Coast	1,284	854
Total, Texas	1,196,618	1,399,461
Smackover	82,186	103,225
El Dorado-Rainbow	82,624	62,548
East El Dorado	5,731	4,142
Total	170,541	169,915
Bull Bayou	44,013	42,544
Pine Island	32,629	32,670
Cotton Valley	25,531	25,570
Hackberry	8,650	17,925
Haynesville	2,187	2,924
Total, Louisiana	113,010	121,633
Total, five states	3,093,896	3,494,697

Cody, Wyo.—An innovation in the Oregon Basin field which has created no little interest is the dehydrating plant, two-unit, installed by the Petroleum Rectifying Company of California, for the Cody Petroleum Company. This company has reduced the percentage of water in the crude from eight to less than half of one per cent., and a total of 2500 barrels is being treated per day. Cody Petroleum Company will install two more units immediately, and beside the regular production will treat some 35,000 barrels of storage oil.

Kemmerer, Wyo. — Crude from the LaBarge field, southwestern Wyoming, is being run through the new 45-mile pipe line laid recently from the field to railhead at Opal. At present there is about 3000 barrels per day being handled, although the line is capable of taking care of 6000 barrels. There is 100,000 barrels of oil in storage in the field. The oil is being shipped by rail from Opal to Salt Lake, Utah., where it is to be refined at the Utah Oil Refining Company plant.



Hyatt equipped Athey Truss Wheels and "Caterpillar" Tractor in oil field service. On the job every day, rain or shine, with lasting bearing satisfaction.

Many oil well equipment manufacturers identify their products with this **"Mark of Hyatt Protection."**

Hyatts are *incomparable* for tough Oil Field assignments

DAY after day Athey Truss Wheels and "Caterpillar" Tractors, trekking heavy loads over poor roads, find the going much easier on Hyatt Roller Bearings.

Sealed against dirt and water, sturdy Hyatts operate year after year with no repairs or replacements. Attention, too, is minimized to infrequent lubrications.

Small wonder that equipment with Hyatt Roller Bearings is overwhelmingly favored by leading oil well operators . . . favored because of the silent, efficient manner in which these better bearings always perform.

Favored, too, because operators know that Hyatt protection means longer lived, stronger built, money saving equipment.

HYATT ROLLER BEARING COMPANY

Newark Detroit Chicago Pittsburgh Oakland

HYATT

ROLLER BEARINGS

PRODUCT OF GENERAL MOTORS

Say you saw it in The OIL WEEKLY

PERSONAL MENTION-MEN YOU KNOW

Honor Old Time Oil Men at Tulsa Exposition

Tulsa.—A permanent organization of old-timers who have served the oil industry 50 years or more is in the process of being perfected, and the choice by popular vote will head the organization as "The Grand Old Man of Oildom." This title will be bestowed at the International Petroleum Exposition October 20-29.

The ballot coupon herewith will be used to make up the membership list of old-timers, and from this list of popular vote the Grand Old Man for the exposition will be selected, and will serve as official host on behalf of Tulsa and the exposition management. At the exposition the Grand Old Man of the world will be elected by popular vote.

The two veterans will be signally honored and will be joint sponsors for all old-timer events. The old-timers will be honored and recognized this year even in a better way than last year. Decision to make a permanent organization for the veteran oil men results from the success in gathering them together at the exposition in 1927, when a medal given by John D. Rockefeller, was awarded the oldest oil man present.

The committee in charge of the old-timers' program has recently had several members added, and at present is composed of the following:

B. E. Horrigan, chairman; A. W. Leonard, Glenn Condon, A. J. Rowley, F. O. Larson, Omer K. Benedict, J. P. Flannagan, Waite Phillips, Henry Ketchum, John D. Mayo, J. Edgar Pew, E. W. Clark, J. H. Markham, Jr., W. G. Skelly, Harry H. Rogers, James Amm and Tom O'Donnell.

Neil Needham, who is connected with the General Petroleum Corporation, at Los Angeles, has returned to California, having made the trip from the east by steamer.

Irving Augur, president of the Bolsa Chica Oil Corporation, has returned to Los Angeles, following an extended visit to eastern states.

George O. Suman, until recently chief resident geologist for the Associated Oil Company in the Bakersfield district, has been transferred to Los Angeles. Mr. Suman will devote the greater part of his time to the Potrero field.

Paul Grimm, geologist for the George F. Getty interests, has returned to Los Angeles after an extended vacation.

J. C. Axelson, president, and C. E. Ellwood, sales manager of Axelson Machine Company, left Los Angeles the forepart of August to be gone for one month. During their trip they will visit the St. Louis plan and will spend considerable time in New York City. On their return they will spend several days in Tulsa.

Campbell M. Hunter of London, international geologist, is visiting properties in Edmonton, Alta., in Canada, in connection with a new oil field trade which will run into the millions, it is reliably reported.

E. G. Allen, general superintendent of production for Roxana Petroleum Corporation in the Central Division with headquarters at Dallas, Texas, is spending his vacation in California.

Preston G. Northrup, member of the partnership firm of Northrup & Carr, has returned to his headquarters at San Angelo, Texas, after having completed a tour of Europe, including a trip to Egypt. Northrup & Carr are the exclusive agents for the sale of leases on West Texas fee lands of the Texas & Pacific Land Trust, which is one of the largest land owners in the district.

Walter C. Carroll of Pittsburgh, president of Oilwell Supply Company, is making a trip through the Rocky Mountain region this week, visiting the company's various stores in that territory. He is accompanied by John J. Durst, district manager.

C. O. Rison, chief production engineer, Indian Territory Illuminating Oil Company, Bartlesville, Oklahoma, has been in South Texas and Northern Old Mexico for the past two weeks vacationing with his family.

H. V. Foster, president of Indian Territory Illuminating Oil Company, sailed with his family from Honolulu, August 3, for San Francisco, and was expected at his Bartlesville headquarters about the middle of the month.

Marion E. Brock of the executive department of the Gulf Production Company, Houston, has returned from Tampico, where he spent two weeks on business.

Frank Devine, head of the Land Department of the Gulf Oil Company at Mexico City, is in Houston, accompanied by his wife, spending vacation with Mrs. Devine's mother, Mrs. L. J. Masterson.

Jack Ballagh, secretary of Patterson-Ballagh Corporation, of Los Angeles, is now on a tour through the Texas fields, promoting interest in Bettis casing protectors.

Patterson-Ballagh Corporation of Los Angeles, announces the appointment of F. E. Fellows to take charge of the New York office recently established. This office will function as an export office for the company. Mr. Fellows was formerly with the Lucey company, in London.

A. S. Bailey, former superintendent of the Casper refinery of The Texas Company, has been promoted to the vice-presidency of the Texas Pipe Line Company, with headquarters in Houston. R. E. Mossman was named superintendent of the refinery.

GRAND OLD MEN OF THE OIL INDUSTRY

I desire to nominate for membership in the "Old Timers" organization of the International Petroleum Exposition:—

Mr. .....

Address .....

If possible give the following information:

Date of birth .....

Place of birth .....

Date Started work in oil industry.....

Place started to work.....

Branch of industry .....

Kind if job .....

State whether pumper, driller, producer, etc. Is he still engaged in oil industry? .....

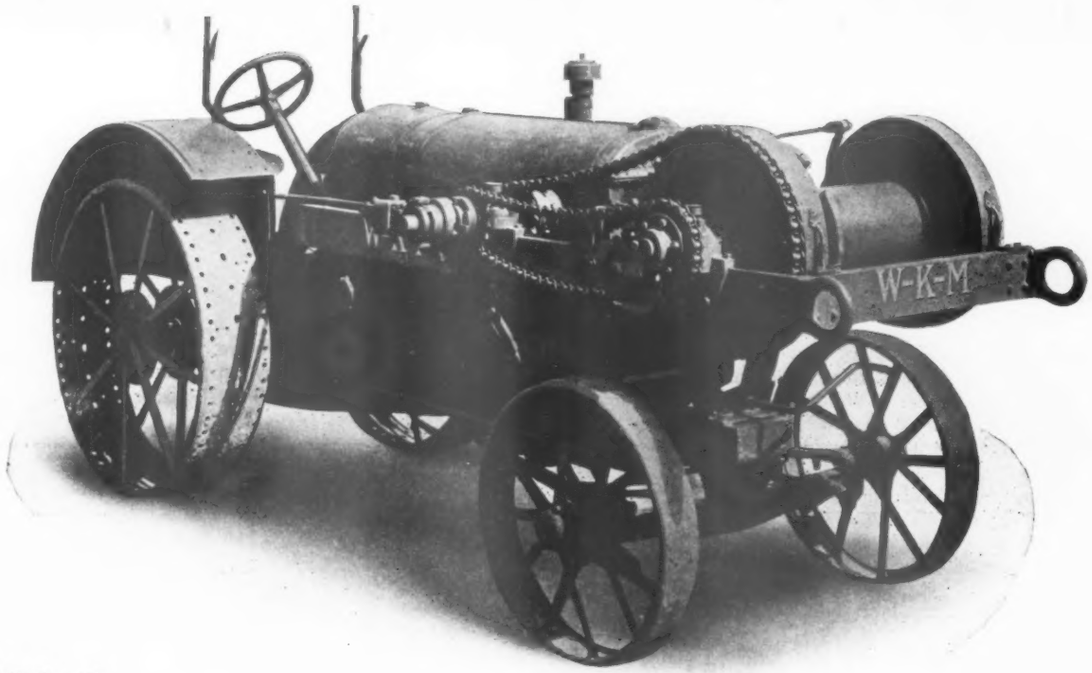
Signed .....

Address .....

NOTE: Mail at once to B. E. Horrigan, Chairman of Old Timers' Committee, International Petroleum Exposition, 207 Bliss Bldg., Tulsa, Oklahoma.

"GRAND OLD MAN'S CONTEST"

All Tulsans nominated for membership will act as official host to all old timers at the exposition. During the exposition the "Grand Old Man" of the entire oil industry of the world will be selected.



One W-K-M DEEPWELL WINCH, *or* *15* individual draw-works — *which?*

From every practical standpoint, the arguments are all in favor of a W-K-M Deepwell Winch, as compared with individual draw-works or bull-wheel pulling units. Briefly, here's why:

FIRST, A Deepwell Winch (including 15-30 International Tractor) costs about the same as three draw-works or bull-wheel outfits, yet, will do the work of fifteen of them easily. That's a big item! SECOND, even if you have draw-works or bull-wheel units, the Winch will save thousands of dollars annually by eliminating replacement of belts and bull-ropes, engine repairs, motor repairs, shut downs, etc. THIRD, owing to its six speeds and great power, the Deepwell Winch cuts pulling time one-third to one-half, saving crew expense, increasing production. FOURTH, it eliminates heavy investments in equipment idle most of the time. FIFTH, a Deepwell Winch can be used for swabbing, bailing, cleaning-out, etc., anytime, anywhere on the lease. SIXTH, being self-propelled, a Deepwell Winch is invaluable for dozens of important jobs around the lease beside pulling work.

SPECIFICATIONS

DRUM:	28″ wide, 26″ flanges, 11″ barrel.
DRUM BEARINGS:	Timken Tapered Roller, self-aligning housings. Very free spooling. Adjustable for wear.
LINE CAPACITY:	4500 ft. ½″; 2900 ft. ⅝″; 2000 ft. ¾″; 1470 ft. ⅞″; 1100 ft. 1″.
LINE SPEEDS:	Six speeds in all as follows, F. P. M. 67, 86, 142, 192, 248, 405.
SINGLE LINE PULL:	15,000 lbs. at 67 F. P. M.; 11,600 lbs. at 86 F. P. M.; 7,100 lbs. at 142 F. P. M.; 5,200 lbs. at 192 F. P. M.; 4,000 lbs. at 248 F. P. M.; 2,500 lbs. at 405 F. P. M.
WEIGHT:	Tractor and Winch together 11,000 pounds.
BRAKES:	Brakes 4″ wide on 26″ diameter drum ends, giving total brake contact area of 475 square inches. Triple compression brake lining furnished.
TRANSMISSION:	International Tractor road transmission used; very heavy and rugged.
REVERSE:	Two reverse speeds; full loads can be lowered in reverse if desired.

Before buying individual draw-works or bull-wheel pulling units, investigate what you can gain by purchasing a Deepwell Winch, instead. Facts cheerfully furnished without obligation.

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Gentlemen—

Please send us your illustrated pamphlet on W-K-M Deepwell Winch for oil field use —thanks.

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Say you saw it in The OIL WEEKLY

A Bottom of the Hole Study of The Air Lift

IN TWO PARTS—PART TWO

By HARRY PENNINGTON
Mechanical Engineer

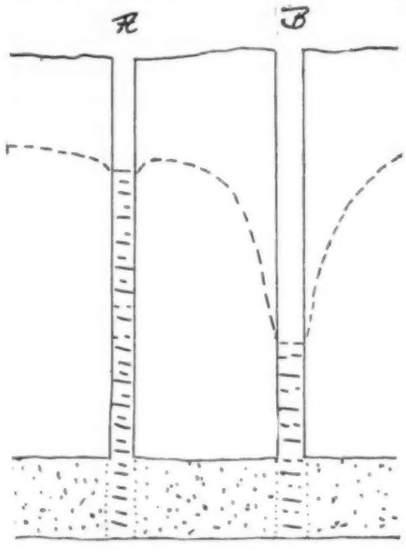
GREATER average depths of present production in California present higher pressure problems than are found on the Gulf Coast, in the Mid-Continent or in West Texas.

Rocking wells for starting has in several cases collapsed and damaged the well beyond repair. These wells cost a small fortune and the loss of one is a serious matter for any operating unit, whether large or small.

Rocking wells, without question, sets up hammer in a well. We know that hammer, in a pipe line, bursts the pipe quite readily. The pipe line, however, is horizontal and hammer therefore is not as severe as may be set up in a well, because the well is vertical. In rocking a well, oil is depressed outside of the flow line, then alternately on the inside, which projects oil upward and allows it to fall back, which may set up the severest hammer.

The casing of deep wells is already subject to high collapsing pressure of surrounding fluid and earth. Steel casing has some elasticity, so that downward hammer may swell the pipe slightly, without giving it a permanent set of course. This slight enlargement, with alternate release of interior pressure, serves to allow outsile fluid pressure to drop back against the casing, where the oil string is inside of a water string with water between, and where an outside string is involved, earth and its pressure also comes into play.

Thus, considerably higher inward pressure may be exerted on the casing anywhere in its length, so that casing may collapse anywhere down the well, particularly where the pipe is not truly round or where it has been dented while setting.



Ordinary static collapsing fluid pressures, in such deep wells are high, and hammer multiplying these pressures, it is not difficult to see that vigorous rocking may collapse the casing.

Therefore, rocking deep wells is not the best practice. Instead, slow starting by removing increments of pressure slowly and at intervals, with time between each increment to allow pressure equalization without shock, in well casing and in formation, is the safer method of starting deep wells.

The same observations toward sustaining the well wall in the producing formation of Mid-Continent and Gulf Coast wells apply to California, especially where the producing formation is not hard. The great thicknesses of oil sands found in the deeper California wells sets up the likelihood that there may be, in fact, logs show there are, softer strata which require support and which may cave easily when inward pressure formation is allowed to act when a large head is removed quickly from the casing.

Sand

In any well that produces sand of any kind, the maintenance of sufficient velocity in the flow line or in the casing serves to lift sand out of the well. The smaller wells pumped with air—those in which the velocity of oil, gas and air may not be maintained sufficiently high—are best pumped through an inner line for it is possible to use 5 3/16-inch flow lines inside of 6⅝-inch, affording ample capacity for almost any well after it has subsided enough to require air.

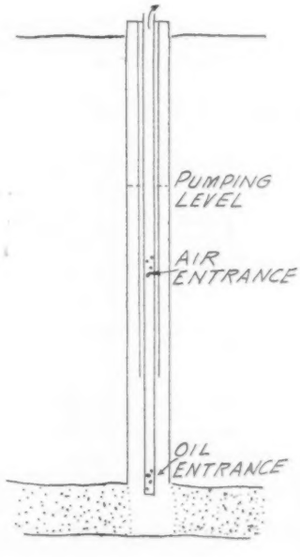
And, even though the pumping level is not to or close to bottom, oil may be picked up close to bottom, by extending the flow line in close proximity thereto, but with openings for air up the line at a suitable point. When oil and gas are rising up a 6⅝-inch casing, its velocity is slower than when it enters the smaller flow line, and sand may not be lifted from bottom to the flow line. But, extension of the flow line close to bottom, to pick up sand and send it upward in the smaller flow line may be readily done, to keep the well free of sand.

This method of piping a well is shown in Figure 8, where the oil working level is above the openings for air into the flow line, but the flow line extends to bottom, with openings near bottom for oil entrance, which secures a higher velocity for lifting sand out. If velocity in the flow line is correctly fixed, the larger casing sets up a lower velocity, which is incorrect. A means of changing the point of admission of air into the flow line sets up stage lifting, which has considerable advantage toward making well operation safer, and which makes for continuous production.

The answer, therefore, is stage lifting —controlled lifting of definite amounts of oil column from the well at definite intervals of time, to be able to pump from the most practicable depth, keeping the working pressure at the compressor pressure, and making up the deficiency of higher pressure by added air volume rather than by pressure.

With controlled stage lifting, we can "feel" of a well and ascertain its possibilities and limitations, far more quickly than by changing the size and length of lines and the amount of starting as well as operating pressure.

As an instance. Two wells of the same depth and thickness of sand—adjoining wells with the same length of strainer. The standing level in each case was 1050 feet and with lines submerged 1500 feet, starting pressure in each case was 685 pounds at the well mouth. But, after blowing off the initial head, one well started pumping at 80 pounds, delivering 110 barrels daily, while the other well



The LARKIN IMPROVED SAND PUMP

REGULAR BOTTOMS

In the Larkin Regular Bottom, the legs are short allowing the pump to rest as near the bottom of the hole as possible and still obtain the necessary suction to remove the greatest amount of sand and sediment quickly.

is the best known piece of equipment being used—

1—to increase oil production by cleaning sand and sediment from the hole.

2—to take sand samples for testing purposes.

With this pump and both of its bottoms, the driller has the best equipment there is for such work.

BIT BOTTOMS

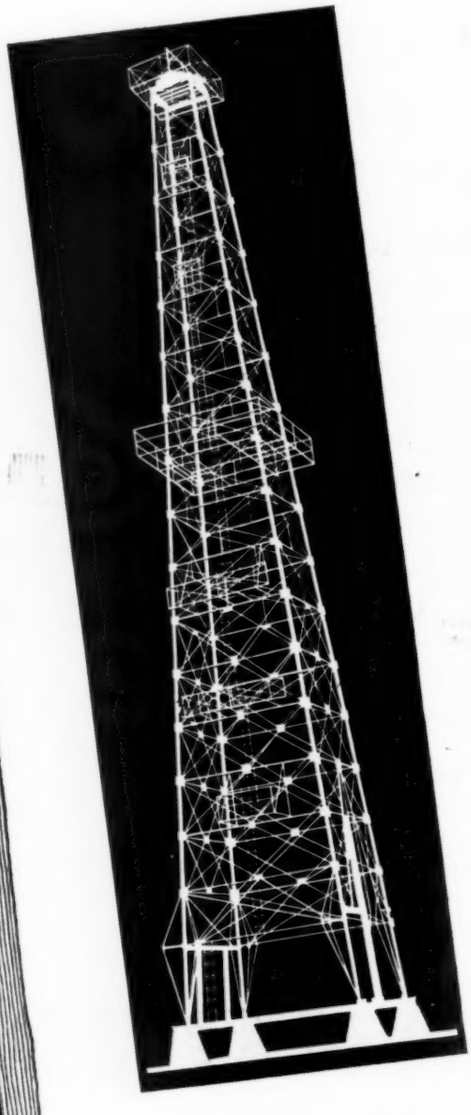
This bottom is used for drilling and breaking the sand loose. Its chisel shaped design is unique, prevents sticking, and allows successful operation in tightly packed sands.

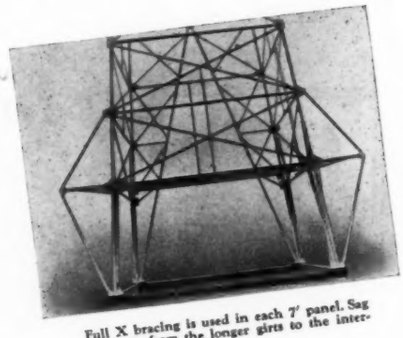
THE Larkin Improved Sand Pump will clean out more wells, for more years, than any other sand pump made. Fortify yourself against future trouble and loss by ordering one today—and be sure to include both REGULAR and BIT BOTTOMS.

LARKIN & CO.

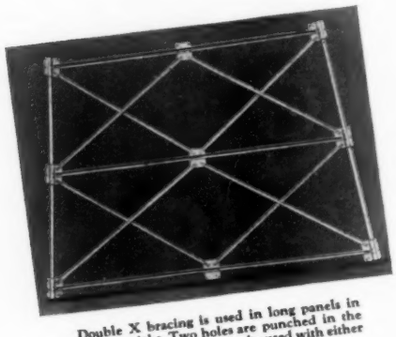
BUTLER, PENNA.

The NEW Moore

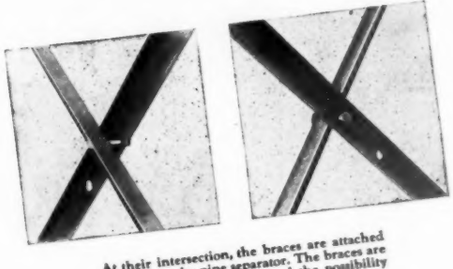




Full X bracing is used in each 7' panel. Sag rods run from the longer girts to the intersections of braces above.



Double X bracing is used in long panels in high derricks. Two holes are punched in the center of braces so they can be used with either end up.



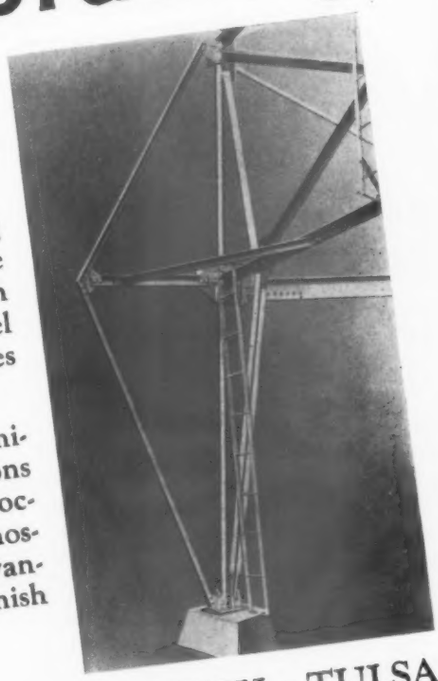
At their intersection, the braces are attached by a bolt and a pipe separator. The braces are thus held together rigidly, and the possibility of rattling is eliminated.

Champion
A SUPER DERRICK with *super* bracing

The Bracing in the Moore Champion Derrick is of structural steel throughout. Its design gives an exceptionally rigid structure, easily and quickly erected.

A new feature is the outside wing bracing in the first panel. This compensates for the lack of regular type bracing inside, which must be omitted because of the bull wheel or draw works. The wing bracing gives the utmost rigidity to the derrick.

Bracing is furnished galvanized or aluminum painted. (The seamless leg sections are always galvanized.) The hot dip process is used for galvanizing. Where atmospheric conditions do not demand galvanized bracing, the aluminum painted finish gives satisfaction.



Write for Descriptive Bulletin

LEE C. MOORE & CO., *Inc.* PITTSBURGH · TULSA

Established 1907
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Stocks in All Principal Fields

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Moore
STEEL DERRICKS
ALL STEEL RIG EQUIPMENT

maintained a working pressure of 510 pounds, delivering 2025 barrels daily.

Lowering the air line in the first well to 3500 feet, which increased the starting pressure enormously, the working pressure rose to 95 pounds and production increased to 710 barrels.

Lifting 2450 feet of oil column off of the formation, with such a tight strainer, can but set up high inward pressure on the strainer.

These figures also show the relative finishing of wells; the first well had a depression factor of 0.32 while the second well factor is 6. With the same finishing, these two wells should show about the same factor—the higher factor.

Pumping Loads

Since the industry now has commercially profitable wells down to over 7000 feet —wells that flow and return the investment during the flowing period—when reciprocating pumps are installed, the standing level of oil may be initially within reach of this type of pump and the working barrel may be successively lowered, until the limit of working barrel pumping is reached. Just what this limit is may be computed from sucker rods strength.

Using the highest test steel, with say 150,000 pounds tensile strength, and using a factor of safety of only three, a ⅞-inch sucker rod will support a load of 30,000 pounds. The weight of a 5000-foot string of ⅞-inch sucker rod is about 11,500 pounds, and using a 2¼-inch diameter working barrel, the load of 5000 feet of 0.90 gravity oil is 7777 pounds, making the total dead load that must be accelerated at each stroke, and lifted, 19,200 pounds, plus friction. Approximately twice the weight of dead load is placed on sucker rods when making the unstroke and with an efficiency of 75 per cent. the total sucker rod load is 51,200 pounds, which is considerably above the 30,000 pound permissible load on ⅞-inch rods. To increase the rod diameter adds weight and, in addition, as sucker rods increase in diameter, the unit strength of the steel of which they are made decreases, so that no advantage is gained by making the rods much larger than ⅞-inch.

Thus, reciprocating pumps, although they would pump deep wells more satisfactorily when production is low, then other methods in so far as well damage is concerned, still the mechanical limitations of reciprocating pumps, as set out above, has prevented pumping any deeper than the strength of sucker rods allows, although several sucker rod manufacturers have turned to the better grades of steel and heat treating for securing high strength rods.

Then, after sucker rods have lowered the working oil level to the limit of this type of pump, to pump still further down requires another method—the simplest of which so far is the air lift or gas lift, according to whether air or gas is used.

This problem of deep well pumping is becoming universal; the Gulf Coast, West Texas, California and Oklahoma, all have the same depth problem, although some fields are not beset with as much well troubles as others.

The upper levels that produce oil have been, for the most part, drilled; it is only by drilling successively deeper wells that the great sustained production of our country has been maintained. And in the constant search, wells go deeper and deeper, with more severe requirements for pumping, not only as to equipment, but as to the wells themselves, for the deep wells have very much higher pressures than shallow wells, requiring the best well work to finish such wells, and to pump them so as to prevent damage.

Deeper Pumping

If in a deep well, production is studied from a pressure standpoint, we find that the deeper the well is pumped, that is, the deeper the working level of the oil surface in the casing is maintained, the greater is daily production. To place a working barrel or air lift at 2000 feet with a 1000-foot submergence, secures, we will say, a definite quantity of oil; lowering the working level to 3000 feet, additional oil per day is secured, and so on down to bottom, and this paper is concerned with the forces involved when doing this.

When pumping a well with working barrel and rods, the working level upon starting to pump is depressed slowly. Rarely is well damage due to this method of pumping. The capacity of working barrels, however, cannot be as high as that secured with air.

On this, note the following fundamental. The active energy agent in a formation that forces oil to the well bore, where we can get hold of it by any method, and lift it to the surface, is formation pressure set up by water surrounding the structure, compressing gas into liquid oil, and compressing other gas into solution with oil, and water, too. Buoyancy of free gas propels it to the roof of formation.

So long as this pressure is retained, production is large, but to produce oil with the very thing that furnishes this pressure, dissipates the most potent agency for high recovery. To assist recovery by introducing air or gas, or applying mechanical means for lifting, and by that means conserving gas of the formation, together with its energy, not only secures the duty of the gas for driving oil to the well but we also have this gas eventually for lifting oil.

Reducing the working level in a well bore always lowers formation pressure surrounding the well, setting up a difference in pressure between well bore and formation, which drives oil toward and into the well. With continued lower pressure, gradually decreasing pressure zones surround the well, as indicated by field measurements, which induces oil from further away, sustaining production.

As the writer has noted before, in the pages of THE OIL WEEKLY, in two issues, entitled "Theoretical Mechanics of Flowing Wells," volume of gas, and not wholly pressure, is the active lifting agency from the point up to where well pressure has forced the oil to the surface, for when air or gas is released in the confined area of a flow line, the bubbles propel oil upward by buoyancy and by frictional contact. Pressure is only incidental, in that it is necessary to introduce air into the oil down in the well.

Effect of Choking

Therefore, when means are adopted to prevent high pressure at the surface, before going through a choke or beam, all gas and all air affords a higher duty. For instance, flowing natural, before going through a choke, with 680 pounds pressure on the inside of the line leading to choke, the volume of gas is reduced to one-forty-sixth as much as the same quantity at atmospheric pressure and so far as duty is concerned, if this well were piped with a tapered flow line, which serves as a bottom choke, and is also piped to maintain an average uniform velocity, taking into consideration gas released by pressure reduction in the flow line, so that such severe choking is not necessary at the surface, the pressure inside the choke may be reduced. When reduced to, say 340 pounds, the volume of gas is doubled, and its duty materially increased.

To choke one well for providing gas to pump another well is the height of folly in the light of endeavoring to obtain maximum recoveries. To use upper gas for pumping a lower oil level eventually reduces pressure in the lower formation, and that also is not conservative of natural resources of wells.

A further disadvantage of starting wells at once, as in straight air lift work, is the necessity for high pressure capacity compressors. The early air plants of the Gulf Coast dealt with wells of only moderate depth. Sour Lake, for instance, pumping from the cap rock, was only 875 feet deep; Jennings, Louisiana, was 1700 feet. In these wells, air pressure required was low.

Today, however, with deep wells, pressures are required about as high as can be comfortably maintained. Compressors built for maximum pressure of 1200 pounds are frequently operated for a short time in starting wells, at pressures up to and over 1500 pounds.

There are many dangers in such high pressures and the cost of machines is high. To purchase machines all with high pressure capacity for starting and also operating, is not economy, for when operating, the air cylinders are always over-powered.

Operating Pressures

Handling high starting and low operating pressures—that is starting pressures of 1000 pounds or over, and operating pressures of 400 to 600 pounds, a matter of duplicate lines to each well, one line for high and one for low pressure, or if a single line is used and high pressure, it becomes necessary to pinch valves here and there to start a well, and then after a well is started, to open various valves for equalizing line pressures for constant operation. The pinching operation is difficult to accomplish without shutting other wells down and a large crew is required along the lines.

On the other hand, stage lifting allows the use of a single line, manifolded to all compressors at the plant, with main lines connecting through branches to each well, and with compressor pressure fixed

HINDERLITER

Improved Split Casing Ring

(Patented)

The Hinderliter Patented Split Casing Ring can be placed around the casing or pipe in the process of lowering or pulling or suspending in the same manner as ordinary casing clamps without the assistance of bolts and units, with the increased factor of safety.

HONEST TOOLS

at the plant, it then becomes possible to use only a single line to start and pump all wells, and to use a single pressure for all operations.

This is by far the simplest and most economical method in that some wells require more air than others; when one, two, three or four compressors are allotted to each well, there is usually a surplus of air for that well for it is rare that a compressor or several of them will furnish the exact amountof air required by a well. In single larger compressors per well, the low range of governing speed of gas engines, and the lack of governing speed of electric motors usually used, furnishes more air than required, so as to be sure there is enough.

Operated in battery, however, compressors may run at their economical capacity and load, and with wells also in battery, just so much air as required may be taken out of the trunk line for each well, so that fewer compressors are required. And with stage lifting, the cost of compressors for lower pressure is also materially reduced.

When a well requires less pressure than that of the trunk line, that well may have an automatic pressure control, which may be set at any desired lower pressure and maintained at that pressure as long as desired.

In straight air lift work—without stage lifting—it is seldom that the most efficient percentage of submergence when pumping, is maintained. The main reason is that there are many factors beyond control, the main one being that depth is not usually such as will permit using the best submergence ratio.

Wells nowadays are so deep that to maintain the most economical submergence ratio, working pressure becomes too high, and the better practice is therefore to maintain the pumping level to a safe limit, and let working pressure run up to the working pressure of compressor, substituting volume of air for pressure, meaning that more air is required, but that plant costs and dangers are lowered.

Patent Situation

The patent situation as to stage lifting is not as clouded as in many other well devices, because stage lifting is now over 30 years old. The first stage lift for wells is shown by patent office records, to have been patented in 1898, with succeeding patents on variations of the same principle. Early, on the Gulf Coast, stage lifting was practiced to avoid starting the other fellow's well instead of your own.

In several of these expired patents, the method of accumulating pressure in the casing, to blow off successive stages is also shown.

Cut Oil

The one disadvantageous thing about air lift is cutting the oil when water is present, forming emulsions. High velocity up the flow line, turbulent flow due to using flow lines not plugged and reamed, abrupt increase in flow line diameter when using graduated lines, are some of the causes of emulsions, most of which may be attributed to high velocity set up by high operating pressure.

A constant diameter flow line sets up a gradually increasing velocity from entrance to flow line to the surface, in the ratio of expansions of the volume of gas. Added to this is the release of gas in solution and the boiling out of the fractions formerly liquified by higher pressure, while coming up the flow line.

If 500 pounds is the pressure under which air or gas is admitted to a flow line, the volume of each cubic foot at that pressure is theoretically increased to 33 times as much in the flow tank. Modifications of this are solubility. Immediately upon contacting oil, air or gas enter into solution in an amount depending upon the pressure at contact. When pressure is reduced as the mixture flows up the line, some of the air or gas so placed in solution, releases, setting up considerable variation in velocities that may be computed.

A definite velocity is all that is required, and when this is reached, additional velocity is of no benefit, but is rather a detriment, both in waste of pressure and in cutting the oil.

Then, it is evident that graduated diameter lines are beneficial in air pumped wells, but when used, there should be only one point of air admission, to start oil upward from that point and when started at the correct velocity, any additional admission of air above that point is also a waste.

Turbulence may be largely avoided in tapered lines by using sleeves of rather long length, with the desired taper, when passing from one diameter to another. These sleeves especially made, are not, however, expensive.

Tubing is plugged and reamed to avoid sharp shoulders at the ends and using outside upset tubing affords better efficiencies and lower cut oil percentages than ordinary casing or pipe.

In studying an above-ground set-up of an air lift demonstration, pumping water 245 feet upward, with the bottom of the installation of glass, the writer noted that air emerged from the air line and, upon entering the water, formed a milky emulsion, which settled out immediately, not being present in the water at exits. The opportunity has not been afforded in any subsequent work to make an observation of oil or gas entering oil at the high pressures now prevailing, but there is a bare possibility that this is a partial cause of emulsified oil.

Nowadays, it is usually a foot race to get as much oil out of a producing sand as possible before pressure subsides. Formerly, it was a foot race between producers, but the slow realization that gas conservation is more important, has led to other methods leading to greater recoveries.

When rock pressure subsides, water usually enters as a factor, for water, when once elevated to the producing level, usually increases with lowering rock pressure.

The great quantity of gas, far more in volume than the oil, in some—most—fields, is, with its expansive quality, the one means of maintaining production without lowering pressure directly with volume of oil taken out, for gas acts as a buffer, maintaining pressure on the sand, even with large withdrawals of oil, when gas production is held down.

Rock Pressure

Rock pressure—buffetted by gas—is 98 per cent of the means of driving oil into the well bore. As long as rock pressure is held somewhere around that originally found, the water either below or surrounding, is held in its original place. When rock pressure is relieved, water has free gravitational flow, and the same static ground pressure that accumulated oil and gas is then free to push water where it pushed oil, following the oil through the formation, either upward, or horizontally, or both, to the well.

The substitution of mechanical power for pumping, as a means of eliminating the use of as much of the natural forces of the well as possible, serves to retain natural forces longer.

In this wise, air lift has its greatest utility, for when production is greater than can be handled with working barrels, and production of oil can be stimulated with air as in no other manner, the use of air or of introduced gas eliminates the requirement for formation gas, making it possible to retain formation gas in the formation, where its duty is of far greater, incalculable value, than when it is let out for doing the working of lifting oil to the surface.

For maximum recoveries of oil, whatever the method of recovery, extended intimate study of the natural forces that accumulated an oil field and that are found when it is opened up, furnishes a prolific field for improvement, the writer has learned in past years.

Air lift engineering, while calling for accurate mechanical knowledge of fundamentals, as well as skill derived from field applications of air lift pumping, is not nearly so important as the natural forces found in every well subject to pumping or flowing, for these forces are of far more moment than the mechanical problems of air lift.

Air lift is always the same in principle, but oil fields are not; study of the latter, by close field contact, is a prerequisite for pumping by any method, and the object of this paper has been toward study of wells, rather than of air lift, or gas lift.

Pottawatomie County

Tulsa.—T. B. Slick's School Land 1, in the southeast corner of Section 16-6n-5e, Pottawatomie County, got a hole full of salt water in the second Wilcox sand topped at 4708 and drilled to 4745 feet. The hole will probably be plugged shortly, having got salt water in the upper Wilcox.

Fuhrman's Buck 1, in the northeast of the northwest of the southeast of Section 26-9n-10e, Hughes County, east of Seminole area, got a hole full of water August 9 from sand at 3128-70 feet and was shut down temporarily.

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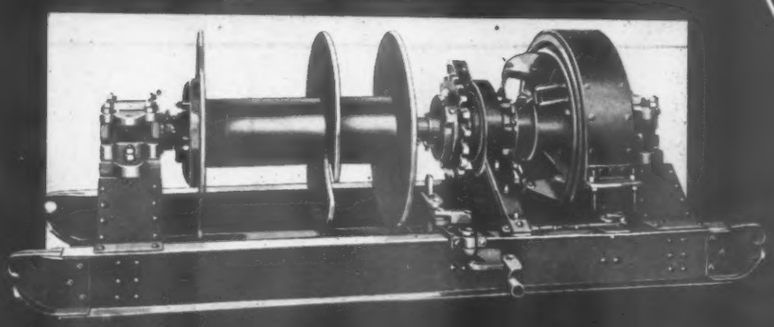

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Say you saw it in The OIL WEEKLY

Structure Favor Oil and Gas Production In New Jersey

By ALFRED C. HAWKINS

SINCE neither oil nor gas has ever been produced in New Jersey, the discovery of favorable geological structure in the State and within the metropolitan limits of Greater New York City is creating much interest. A beautiful terrace structure, including some 5000 acres, has been leased by the Middlesex Farms & Development Company of South River, New Jersey, a corporation comprising Eastern capital. It is hoped by many of the oil fraternity who have recently seen this condition that this concern will drill and give it a fair test in the near future.

This structure is located in Middlesex County, New Jersey; its longer axis extends for six miles or more in a northeast-southwest direction between the towns of Old Bridge and Dayton, and its shorter one from Fresh Ponds and Dunham's Corner to Jamesburg and Helmetta. (See map, Figure 1). Structurally it may be classified as a terrace.

The underlying rock formations belong to the Comanchean Cretaceous (the Lower Cretaceous), including a series of sand and clay strata with occasional pebbly layers. These lie unconformably upon the westward dipping shale, sandstone, and tap rock (diabase) of Triassic age, which outcrop on the surface in the Rocky Hill ridge just to the southwest of this area, and in the region west of Milltown. The latter portion of the area just mentioned, including the exereme southwest portion of the structure herein described, has been mapped areally in the Trenton Folio, No. 167, of the United States Geological Survey.

The Cretaceous strata comprising the clay and sand layers belong to the Raritan Formation, the Woodbridge series. These include some of the finest quality brick and tile clays in the entire coastal plain of the United States. They lie normally nearly horizantal, the dip being about 50 feet per mile toward the east-southeast. Their total thickness in the Parlin, New Jersey, area (just southwest of South Amboy), is something slightly less than 300 feet. In the area herein described the thickness is doubtless similar, the locality being along the same general line of strike. The Triassic sandstone underneath the Cretaceous should, according to the New Jersey State Geological Survey reports, be part of the Stockton series, which includes, together with some red shale, much white or gray sandstone of a porous nature. The dip of this formation is about 20 degrees to the west-northwest, which is an unfavorable circumstance, and the great thickness of the diabase (known to approach 1000 feet) with the apparent slow dip of its eroded surface to the east underneath the clays, make recovery of oil from these underlying rocks very doubtful.

The Cretaceous series of the Woodbridge and Parlin area includes, at the top, a sand bed with a few feet of gravel in its middle portion, which has been more or less cemented into conglomerate by limonite brought in by percolating waters; then, below, a fine whitesand. Below this sand are 60 to 100 feet of a very dense and tight clay of varied colors, the true

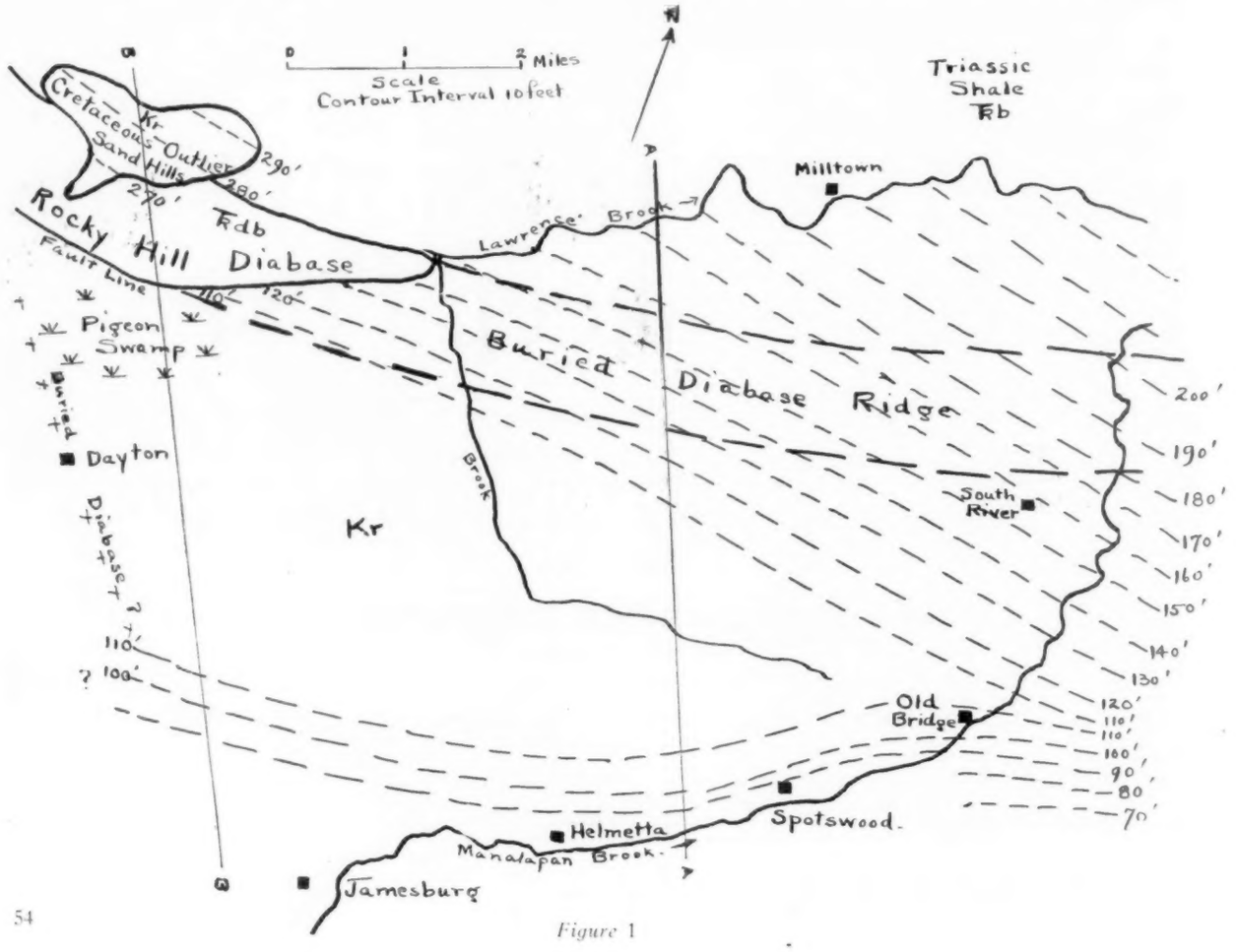
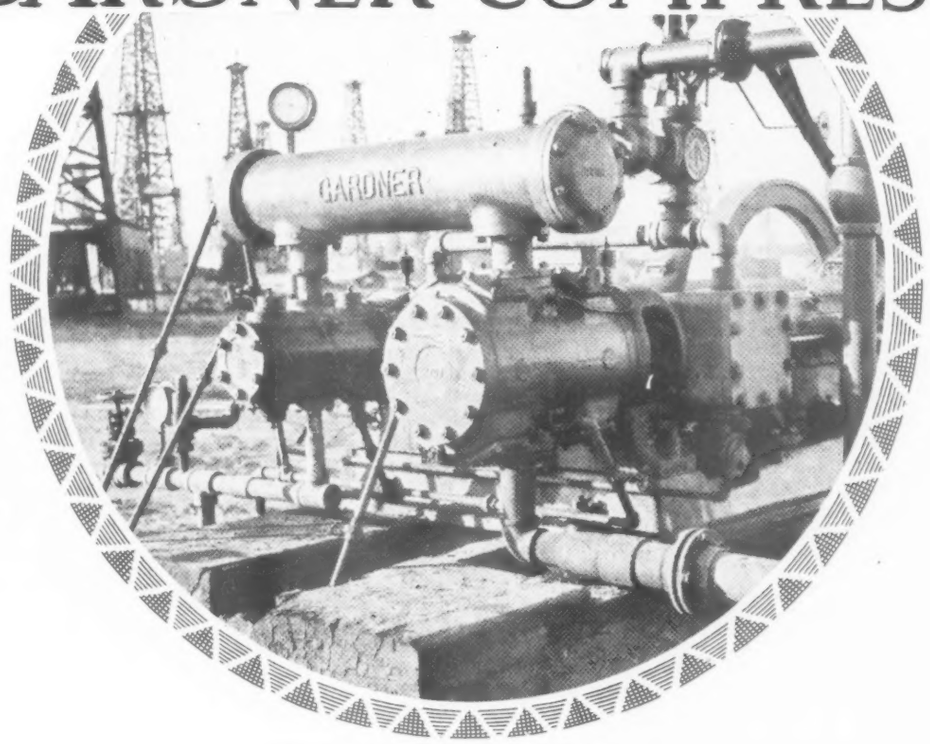


Figure 1

GARDNER COMPRESSORS



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Say you saw it in The OIL WEEKLY

Figure 2-A

Woodbridge clay, which the artesian well logs of Parlin show to contain occasional thin sand lenses. Underneath the clay bed is a loose uncemented sand which is 40 feet or more thick, which is known as Sand No. 1. Its porosity is 48 per cent as shown by actual laboratory tests, and on account of its eastward dip between the layers of impervious clay it carries, in that part of the area north of South River, very large supplies of water, the source of the strong flow of artesian water obtained by the commercial plants operating at Parlin and in the Amboy area. Its only soluble mineral content is rusty colloidal iron oxide. Immediately underneath this latter sand is clay which is gray to red, often grading directly into the red Triassic shale below. All of these sand and clay beds had a nonmarine, probably estuarine, origin, as shown by lignite seams and leaf beds in the Woodbridge clays, together with local leaf impressions in the indurated sand layers above the clay, and occasional dinosaur tracks and bones.

Key Beds

The marker or key bed from which the structure was originally determined is the brown limonitic layer in the upper sand of the Raritan formation. This limonitic bed is especially well developed and prominent in parts of the area where the geological structure has rendered the ground water stagnant for long periods in the past, and it is therefore most strongly developed, to a thickness of three feet or more, in the area of the terrace structure, and at the Sand Hills, a mile to the west, where an outlier of the Raritan formation remains behind the curving trap rock wall of the Rocky Hill ridge, and where the total thickness of the limonitic beds is about 25 feet. The limonite bed carries abundant light colored, well rounded quartz pebbles, and locally, in sandy micaceous layers exposed three miles south of the town of South River, excellent impressions of fossil leaves, resembling maple, wild cherry, and elm, whose exact scientific classification has not yet been made, and some small globular plant galls.

The existence of this oil and gas structure seems to be due to the presence of the diabase ridge on the border of the Cretaceous area. The diabase is a continuation of the Palisade ridge which extends along the west side of the Hudson River as far north as Haverstraw, New York, and southwestward as the ridge called Rocky Hill to Hopewell, New Jersey. The elevation of its upper surface is that of the peneplain which existed over this region at the beginning of the Cretaceous time. The level of the peneplain is low in the region around South River, where the diabase has been struck in a well at 130 feet below sea level. An old well at Fresh Ponds passed through 60 feet of clay and struck the diabase at that depth without encountering any sand. At the Middlesex County workhouse just south of New Brunswick the diabase emerges from the Cretaceous cover. Along the northwest side of Staten Island it is also exposed, extending thence northward to form the peninsula at Bayonne, New Jersey. But the elevation of the peneplain was not constant during the time of Cretaceous deposition, as is plainly shown by the fact that the Lower Cretaceous sediments in New Jersey are nonmarine, while the Upper Cretaceous sediments are marine, and that their dip differs slightly.

Original Deposits

The following is the author's interpretation of the origin of the geological conditions which give rise to this terrace structure. At the outset it must be recognized that the principal member of the estuarine deposit of the Raritan formation, which is the Woodbridge clay, was deposited in a horizontal position. Its present seaward dip of 50 feet to the mile therefore has been acquired by tilting since deposition. This tilting was general in the Lower Cretaceous sediments, and was accomplished by a very large scale flexing of the earth's surface, namely, a tilting of the entire coastal plain, and the widespread peneplain which included the whole of Northeastern New Jersey and adjacent areas. Before this tilting took place, the eastern margin of the Triassic must have been higher than it now is, and the Blue Ridge Mountains to the northwest, but relatively little above sea level. Thus the curving loop of the Rocky Hill diabase ridge was, at that time, for the most part above the level of the sea, affording a very quiet area of estuarine waters in which were deposited the very fine clays of the region immediately adjoining Woodbridge and Perth Amboy, outside of which relatively small area the clays do not generally have the same high quality. Then after deposition of the Lower Cretaceous was completed, the region of the Appalachians began to rise, tilting the coastal plain seaward, so that on its eastern margin the marine beds of the Upper Cretaceous were deposited. But part of the Raritan beds had been deposited across the outcrop of the ridge of diabase between Rocky Hill village and Milltown. As the uplift occurred, these beds on the east side of the diabase ridge failed to tilt with the rest, but broke away along the line of the ridge, retaining a horizontal position, even developing a slight westward dip or reverse, and leaving the outliers of the Cretaceous high up behind the trap ridge at Sand Hills. The elevation of the top of the Raritan Formation at Sand Hills is 293 feet, while outside the trap ridge, a mile east of Sand Mills, it is 110 feet. The only way to account for this condition is to suppose a normal fault of approximately 200 feet, which has not hitherto been mapped. Evidently the fault dies out in flexures at the ends (See Figure 2, a), though on the southwestern end it is concealed by Quaternary gravels. One or more slight earthquakes which have been experienced during the past year in this part of the coastal plain might reasonably be ascribed to continued movement along this fault.

There is a well marked flat shown on the topographic map over the area of this terrace structure, with a prominent swampy area to the east where the abrupt easterly dip on the edge of the terrace descends to the valley of Manalapan Brook. All of the drainage on the terrace is toward the west, though there is no cuesta or ridge along its eastern margin to make the streams follow such courses. The principal stream on the terrace takes a southwestward course from a point not far from Old Bridge, and follows what is presumed to be the higher part of the structure. This terrace is also marked by a large number of sink holes, many of which are 100 feet or more across and 20 feet or more deep, some occupied by ponds plainly shown on the topographic map, the only such ponds in the coastal plain area. Pigeon Swamp, on the terrace, is thought to be in a series of such sink holes. Topographic features of this type are found in many of the shallower gas fields in various parts of the world.

There is also much evidence, such as a train of trap boulders and an abrupt line of demarcation between good and poor water wells, of the existence of a long ridge of diabase extending directly eastward from the bend of Rocky Hill at Dayton. This, if present, would help to seal the structure on the southwest.

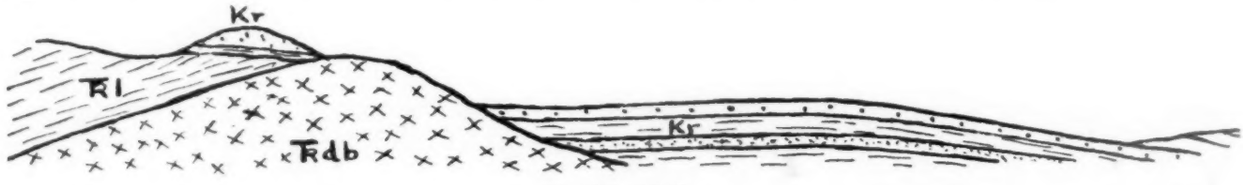
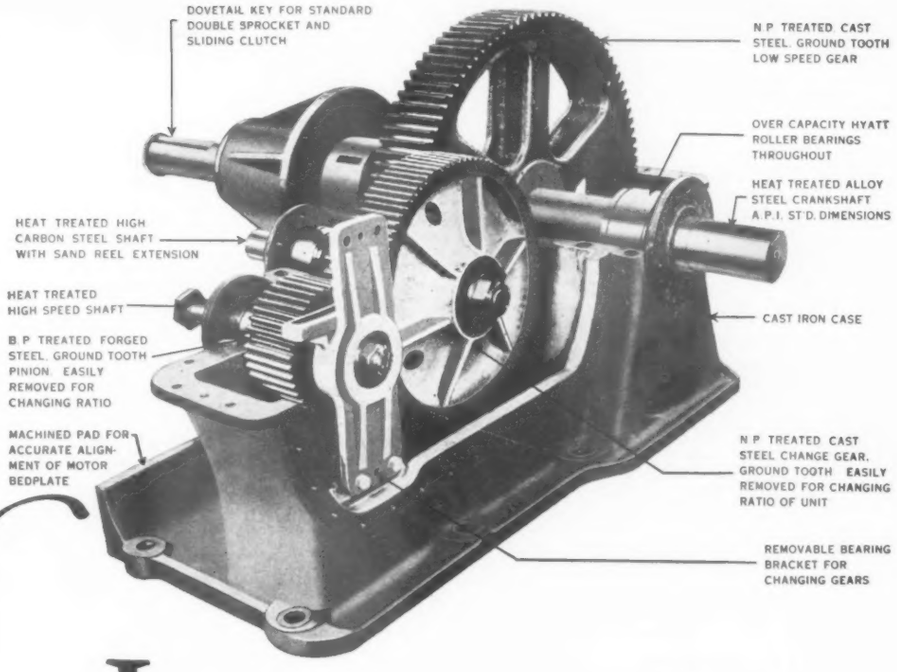


Figure 2-B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Talk Plans for Curbing Santa Fe Springs

(Continued from Page 37)

a small area and it is possible that the deep sand will not be extensive. Both shales and sands produce over a wide area in the Midway field. The Republic Petroleum Company's discovery well on Section 8-32-23 came in with an initial production of 1150 barrels and is still flowing more than 1000 barrels after several months. Chanslor-Canfield Midway Oil Company's first well, No. 29 on Section 8, failed to develop a high gas pressure, but flowed about 600 barrels on the initial test. The well is now producing 800 barrels on compressors. Even though the flow was not satisfactory, the fluid level was ideal for compressor work.

Union Avenue Locations

Two more locations have been made in the Union Avenue district by the Pacific Eastern Production Company, following the failure to make an oil well of the three already drilled. KCLA No. 4 is located 330 feet north and 330 east from the southwest corner of the southeast quarter of Section 6-30-28 and Lloyd 1 is 800 feet north and 1450 feet east of the southwest corner of Section 5-30-28. In locating these new wells, the company will explore a little further to the east and south. KCL No. 3, recently completed as a gas well, was shut in for about a week, but opened up again in the hope that it might flow oil as well as gas. The shut in period failed to help the well, however, and it came back as a gasser.

General Petroleum Corporation has abandoned Stiles 1, Section 35-25-25, a wildcat test of the McFarland district, after a long and tedious drilling job. The well was carried to 5769 feet but failed to develop important showings below 5000 feet. The well was located about midway between McFarland and Delano, and about 16 miles northwest of the Mt. Poso field.

The Petroleum Securities Company, controlled by the Doheny family, has made three locations on Section 21- and 22-27-28, in the southern extension of the Mt. Poso field. The company recently acquired several large leases in the district and will develop its holdings during the next few months. The Texas Company completed Glide 2-3, Section 15-27-28, as a 360-barrel well from 1640 feet. The Signal Gasoline Syndicate has No. 3, Section 27-27-28, ready for a production test, the fluid level indicating that the well will be at least an average producer.

West Texas Production

WINKLER COUNTY

	Producing Wells	Daily Average Prod.
Hendrick Field—		
Southern Crude-R. A. Westbrook	35	*23,515
Roxana Petroleum Corporation	30	*22,300
Skelly Oil Company	9	*16,250
Roxana & The Texas Company	20	*14,215
Pure Oil Company	24	*14,035
Atlantic & Collett-O'Keefe	9	*13,880
Atlantic Oil Producing Co.	24	*12,275
Humble Oil & Refining Co.	30	*12,090
Gulf Production Company	18	*10,345
Southern Crude-Dixie Oil Co.	22	*7,540
Republic Production Co.	9	*6,740
Cranfill & Reynolds, Inc.	6	*5,960
Independent Oil & Gas Co.	15	*5,120
Marland Production Co.	5	*3,820
Texon Oil & Land Co.	8	*3,675
Murchison & Cranfill Bros. Oil Co.	6	*3,195
Prairie Oil & Gas Co.	4	*2,565
The California Company	8	1,785
Magnolia Petroleum Company	8	1,665
Atlantic & Kessler-Logan	1	1,395
Winkler Oil Prod. Corp.	1	*160
Total	292	182,525

CRANE COUNTY

	Producing Wells	Daily Average Prod.
Church & Fields—		
The Texas Company (was Landreth)	16	7,160
Simms Oil Co. & Atlantic Oil Prod. Co.	31	6,300
Prairie Oil & Gas Co.	12	4,935
Tidal Oil Co. & Turman-Maxwell	25	4,450
Magnolia Petroleum Company	33	4,275
Warner-Quinlan Co. of Texas	27	3,665
Humble Oil & Refining Co.	14	3,035
Gulf Production Company	11	1,385
Independent Oil & Gas Co.	7	1,305
The Texas Company	3	505
Church-Fields et al	3	375
T. P. Coal & Oil Co.	1	55
Stidham & Thrasher	1	5
Total	184	37,450
Gulf-McElroy—		
Gulf Production Co.	63	14,300
Gulf-Waddell—		
Gulf Production Co.	1	15
Marland-Hughes—		
Marland Production Co.	14	460
The Texas Company	9	145
McMan Oil & Gas Co.	2	50
C. C. Duffey et al	1	...
Total	25	655
Totals for Crane County	273	52,420

*Production partially pinched.

REAGAN COUNTY

	Producing Wells	Daily Average Prod.
Big Lake Field—		
Big Lake Oil Company	139	13,995
Texon Oil & Land Co.	79	3,905
Skelly Oil Company	1	35
The California Company	1	20
Total	220	17,955

PECOS COUNTY

	Producing Wells	Daily Average Prod.
Yates Field—		
Mid-Kansas-Transcontinental Oil Co.	95	*27,945
The California Company	33	*12,695
Gulf Production Co.	22	*6,530
Gulf Prod. Co. (Crockett Co.)	3	175
Roxana Petroleum Corp.	19	*6,010
Simms Oil Company	7	*5,400
McMan Oil & Gas Co.	9	*4,850
McMan & Marland Prod. Co.	17	*4,785
Humble Oil & Refining Co.	13	*2,580
Marland Production Co.	10	*670
Oil Operators Trust & A. T. Herd	7	*630
Matador Oil Company	1	465
Mazda Oil Corp. & Savoy Oil Co.	3	*245
Red Bank Oil Company	3	*220
Kirby Pet. Co. & Edson Pet. Co.	1	205
Skelly Oil Company	1	100
Phillips Petroleum Co.	1	90
Kirby Petroleum Co.	1	50
Cosby Drilling Co.	1	35
Dixie Oil Co. (Crockett County)	1	20
Grayburg Oil Co. & T. T. Word	3	*5
Total	251	73,705

MISCELLANEOUS

	Producing Wells	Daily Average Prod.
Upton County	284	11,420
Howard County	163	*7,340
Mitchell County	141	3,115
Crockett County	41	2,990
Jones County	31	2,410
Fisher County	4	1,145
Loving County	4	135
Runnels County	2	75
Scurry County	5	40
Ector County	2	10
Total	677	28,680
Total, all fields	1,713	355,285
Total, previous week	1,701	337,405

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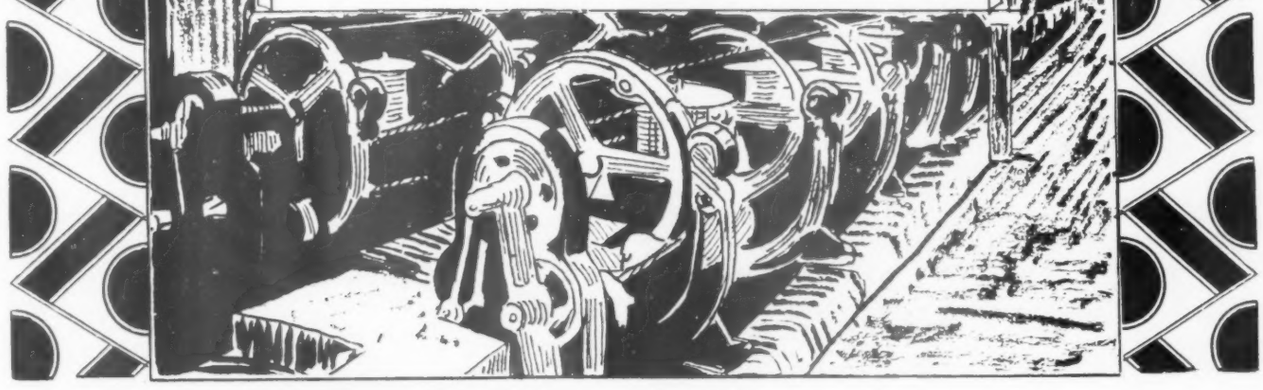

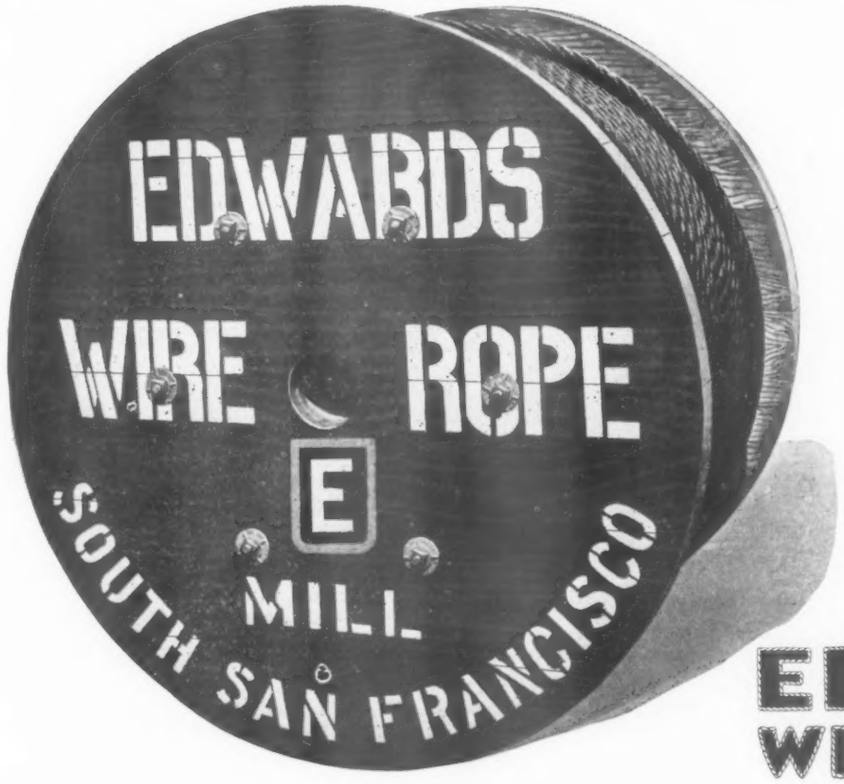

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Summary of Field Operations for July, 1928

EASTERN STATES

	Completions	Producers	Gas Wells	Failures	Initial Prod.
Pennsylvania	168	146	15	7	552
West Virginia	89	14	59	16	212
Illinois	11	10	1	..	192
Michigan	10	10	..	..	1.389
New York	42	41	..	1	119
Indiana	14	7	2	5	298
Ohio	86	50	15	21	3,262
Kentucky	106	63	1	42	2,872
Total	526	341	93	92	8,896

PENNSYLVANIA

Bradford	116	113	..	3	431
Greene	8	1	6	1	3
Tionesta	2	2	..	..	34
Beaver	1	..	..	1	...
Allegheny	3	1	2	..	2
Venango	13	12	..	1	27
Butler	7	7	..	..	21
Center-Middle	5	5	..	..	13
Clarion	13	5	7	1	21
Total	168	146	15	7	552

WEST VIRGINIA

Calhoun	14	2	12	..	9
Wayne	2	..	2	..	...
Mingo	1	1	..	..	50
Roane	8	4	1	3	52
Gilmer	5	..	3	2	...
Ritchie	5	1	1	3	7
Marshall	1	..	1	..	...
Lincoln	8	..	8	..	...
Boone	12	..	11	1	...
Wetzel	5	1	1	3	75
Lewis	3	..	3	..	...
Marion	4	..	3	1	...
Pleasants	3	2	..	1	4
Wood	2	1	..	1	2
Monongalia	1	1	..	..	10
Kanawha	1	1	..	..	3
Harrison	1	..	1	..	...
Doddridge	1	..	1	..	...
Cabell	5	..	5	..	...
Braxton	1	..	..	1	...
Putnam	4	..	4	..	...
Nicholas	1	..	1	..	...
Fayette	1	..	1	..	...
Total	89	14	59	16	212

ILLINOIS

Lawrence	7	7	..	..	92
Crawford	2	1	1	..	70
Wabash	2	2	..	..	30
Total	11	10	1	..	192

MICHIGAN

Muskegon	10	10	..	..	1,389

NEW YORK

Allegany	42	41	..	1	119

INDIANA

Sullivan	1	1	..	..	30
Vigo	2	2	..	..	90
Gibson	4	2	..	2	118
Spencer	2	..	..	2	...
Pike	2	1	1	..	30
Adams	1	1	..	..	30
Monroe	1	..	..	1	...
Floyd	1	..	1	..	...
Total	14	7	2	5	298

OHIO

Northwestern—					
Hancock	3	3	..	..	67
Seneca	9	9	..	..	822
Auglaize	2	2	..	..	44
Shelby	1	1	..	..	10
Allen	3	3	..	..	160
Mercer	1	1	..	..	2
Wood	2	1	..	1	1
Sandusky	1	1	..	..	7
Southeastern—					
Washington	7	4	..	3	10
Noble	2	1	..	1	3
Monroe	2	2	..	..	5
Jefferson	1	1	..	..	3
Central—					
Ashland	8	3	2	3	105
Wayne	5	..	4	1	...
Hocking	1	..	..	1	...
Athens	4	..	2	2	...
Perry	10	10	..	..	1,785
Licking	7	4	..	3	56
Holmes	9	..	6	3	...
Fairfield	1	..	..	1	...
Muskingum	1	1	..	..	152
Cuyahoga	1	1	..	..	20
Gallia	1	1	..	..	15
Meigs	1	1	..	..	5
Medina	1	..	1	..	...
Lorain	1	..	..	1	...
Vinton	1	..	..	1	...
Total	86	50	15	21	3,262

KENTUCKY

Ohio	27	21	..	6	1,367
Daviess	35	21	..	14	1,200
McLean	1	..	..	1	...
Warren	2	2	..	..	57
Barren	19	7	..	12	148
Hancock	2	2	..	..	20
Wayne	3	1	..	2	5
Powell	1	..	..	1	...
Wolfe	4	3	..	1	13
Johnson-Magoffin	4	3	..	1	47
Estill	7	3	..	4	15
Floyd-Knott	1	..	1	..	...
Total	106	63	1	42	2,872

MOUNTAIN STATES

WYOMING

Field—	
Salt Creek	1,199,850
Grass Creek	75,950
Elk Basin	33,950
Big Muddy	85,100
Lost Soldier	126,950
Rock River	84,750
Lance Creek	17,200
Others	222,450
Totals	1,846,200

MONTANA

Cat Creek	52,550
Kevin-Sunburst	261,500
Others	4,150
Totals	318,200

COLORADO

Moffats (Craig)	36,050
Fort Collins	80,200
Florence	36,900
Others	100,500
Totals	253,650

NEW MEXICO

Artesia	35,150
Table Mesa	4,550
Hogback	6,650
Rattlesnake	27,650
Others	6,200
Totals	80,200
Total Mountain States	2,498,250

OKLAHOMA

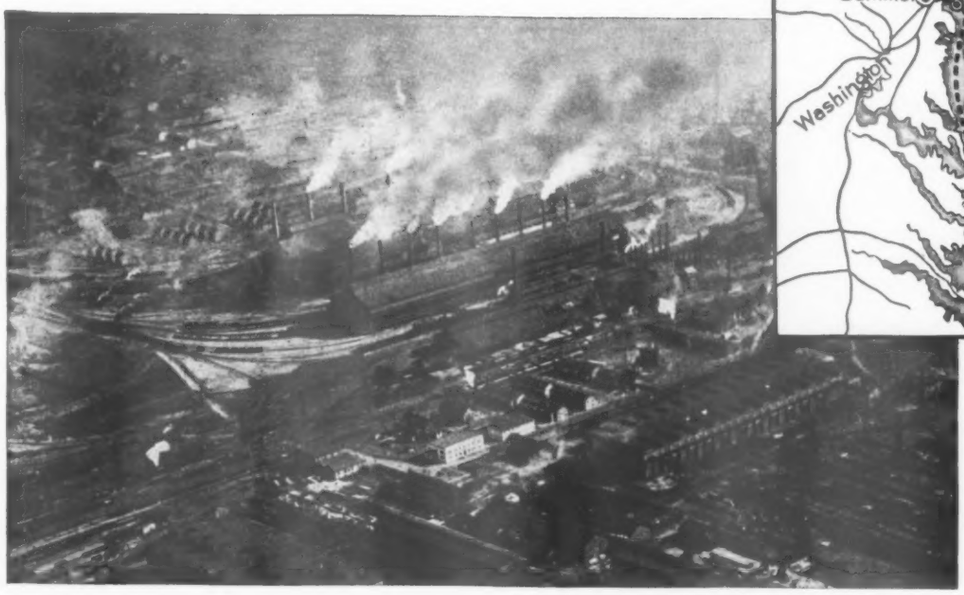
Beckham	3	..	2	1	...
Caddo	3	1	..	2	40
Canadian	1	..	..	1	...
Carter	12	9	2	1	4,191
Cotton	3	2	..	..	103
Creek	31	14	3	14	1,584
Grady	17	1	13	3	100
Grant	1	..	..	1	...
Hughes	1	1	..	..	156
Jefferson	12	11	..	1	635
Kay	8	2	4	2	285
Logan	2	..	..	2	...
Marshall	3	3	..	..	40
Muskogee	27	12	2	13	380
Okfuskee	5	1	1	3	450
Okmulgee	23	6	6	11	90
Osage	29	18	5	6	4,050
Pawnee	6	2	1	3	20
Payne	1	..	..	1	...
Pittsburg	1	..	1	..	...
Pontotoc	12	6	..	6	1,240
Pottawatomie	15	11	..	4	28,693
Seminole	34	24	..	10	15,689
Sequoyah	1	..	..	1	...
Stephens	35	16	4	15	1,889
Tillman	1	..	..	1	...
Tulsa	8	4	3	1	71
Wagoner	9	1	1	7	25
Totals	304	145	49	110	59,731

OKLAHOMA PRODUCTION SUMMARY

Field—	Barrels
North Braman	93,000
South Braman	46,150
Blackwell	108,700
Hubbard	82,000
Thomas	40,950
Tonkawa	424,350
Garber	263,550
Burbank	940,450
Osage	831,100
Cushing	613,400
Yale-Jennings	242,800
Davenport	58,900
Bristow-Slick	669,000
North Okmulgee	462,500
Lyons-Deaner	188,700
Cromwell	290,350
Papoose	130,600
Wewoka	193,350
Seminole	1,579,000
Searight	397,300
Earlsboro	2,444,700
Duncan District	249,150
Graham	167,600
Healdton	437,950
Allen	616,750
Scholem-Alechem	395,850
Bowlegs	1,775,100
Little River	1,282,050
Pearson	141,200
Fox	50,300
St. Louis	881,850
Hewitt	295,150
Others	1,572,000
Totals	17,960,800

KANSAS

Barber	1	..	..	1	...
Butler	6	5	..	1	3,095
Chase	1	..	1	..	...
Chautauqua	1	..	1	..	...
Coffey	2	1	..	1	20
Cowley	6	1	1	4	40
Elk	7	3	..	4	75
Greenwood	15	7	1	7	837
McPherson	2	..	1	1	...
Marion	5	3	..	2	320
Morris	3	..	1	2	...
Osborne	1	..	..	1	...
Russell	4	3	..	1	1,350
Sumner	21	10	1	10	1,310
Woodson	2	..	..	2	...
Totals	77	33	7	37	7,047



Above: Both rail and water transportation lines are available for shipments from Maryland Plant.

Left: Airplane view of portion of Maryland Plant.

Convenient shipment to all points
from Bethlehem's new pipe mills

Above: Section of Railroad yards at Maryland Plant.

Right: Loading Bethlehem Steel Pipe into vessel at Maryland Plant.

THE new pipe mills of Bethlehem Steel Company are located at Maryland Plant, Sparrows Point, Md., near Baltimore. As a shipping point, Maryland Plant enjoys decided advantages, for it is adjacent to a great transportation center from which rail and water lines radiate in every direction.

Inland shipments of Bethlehem Steel Pipe may be made by one of the three trunk-line railroads that enter Maryland Plant. And the location of Maryland Plant on tidewater permits equally prompt shipments by steamer to points on the Atlantic, Gulf and Pacific Coasts. The pipe can be loaded into the vessel at the plant.

The location of Maryland Plant and the unusual transportation facilities that are available are an important factor in Bethlehem's ability to offer exceptional service to jobbers and users of steel pipe. Shipments of Bethlehem Steel Pipe can be made from Maryland Plant to any destination by a direct, quick, economical route.

BETHLEHEM STEEL COMPANY

General Offices: Bethlehem, Pa.

District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Detroit, Cincinnati, Chicago, St. Louis, San Francisco, Los Angeles, Seattle, Portland and Honolulu.

Bethlehem Steel Export Corporation, New York
Sole Exporter of our Commercial Products

BETHLEHEM
STEEL PIPE

KANSAS PRODUCTION SUMMARY

Field—	Barrels
Greenwood County	882,000
Florence-Covert	33,100
Peabody-Elbing	100,950
Eldorado-Towanda	409,350
Augusta-Fox Bush	111,200
Rainbow Bend	49,450
Russell	120,700
Churchill	319,350
Oxford	334,700
Others	824,150
Totals	3,184,950

CALIFORNIA

	Completions	Producers	Gas Wells	Failures	Initial Prod.
Belridge	1	1	..	..	75
Brea-Olinda	1	1	..	..	250
Cat Canyon	1	1	..	..	200
Fruitvale	1	1	..	..	240
Huntington Beach	3	3	..	..	1,210
Kern Front	1	..	..	1	....
Long Beach	25	25	..	..	44,410
Midway	1	1	..	..	150
Mount Poso	1	1	..	..	300
Richfield	1	..	..	1	....
Rincon	4	4	..	..	1,130
Seal Beach	2	2	..	..	1,975
South Mountain	1	1	..	..	100
Sunset	1	1	..	..	200
Ventura	3	3	..	..	12,700
Wheeler Ridge	1	1	..	..	25
Wildcats	4	..	..	4	....
Total	52	46	..	6	62,965

CALIFORNIA PRODUCTION SUMMARY

Field—	Barrels
Santa Fe Springs	1,125,500
Long Beach	6,250,000
Torrance	527,000
Huntington Beach	1,661,000
Dominguez	348,000
Rosecrans	186,000
Inglewood	899,000
Midway-Sunset	2,210,000
Ventura Avenue	1,639,500
Seal Beach	1,062,000
Others	4,077,500
Totals	19,985,500

ARKANSAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Ch'mpagnolle	13	12	1-a	..	9,260	462,150
El Dorado	..	..	..	..	....	166,350
Nevada	..	..	..	..	....	45,000
Lisbon	..	..	..	..	....	63,050
Smackover	1	1	..	..	35	2,040,200
Stephens	..	..	..	..	....	32,050
Others	..	..	..	..	....	3,100
Wildcats	15	..	..	15	....	....
Totals	29	13	1	15	9,295	2,775,900

a—Includes 50,000,000 cubic feet of gas.

TEXAS

TEXAS RECAPITULATION

	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
East Texas	..	..	..	..	....	....
East-Central Texas	..	..	..	..	....	672,100
North Texas	127	85	..	42	23,168	2,716,400
Southwest Texas	1	..	..	1	....	777,450
Texas Gulf Coast	64	42	..	22	29,753	3,285,300
Texas Panhandle	28	15	9	4	2,390	1,963,650
West Texas	126	87	3	36	305,695	10,663,550
Central West Texas	155	60	11	84	4,393	1,718,350
Total	501	289	23	189	365,399	21,796,800

SOUTHWEST TEXAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Caldwell Co.	1	..	..	1	....	....
Dale	..	..	..	..	....	37,900
Laredo Dist.	..	..	..	..	....	259,900
Luling	..	..	..	..	....	413,900
Lytton Spr'gs	..	..	..	..	....	31,650
Somerset	..	..	..	..	....	21,700
Others	..	..	..	..	....	12,400
Total	1	..	..	1	....	777,450

TEXAS GULF COAST

Barbers Hill	..	..	..	..	....	23,950
Batson	4	2	..	2	25	43,750
Big Creek	2	2	..	..	2,700	92,050
Blue Ridge	15	11	..	4	7,175	212,800
Boling	1	1	..	..	7	61,150
Damon Mound	..	..	..	..	....	25,850
Goose Creek	2	2	..	..	110	210,450
High Island	1	..	..	1	....	(a)
Hull	6	5	..	1	2,110	329,050
Humble	1	1	..	..	1,100	40,100
Nash Dome	..	..	..	..	....	(a)
No. Dayton	..	..	..	..	....	(a)
Orange	3	2	..	1	460	124,300
Orchard	..	..	..	..	....	(a)
Pierce Junct'n	6	4	..	2	3,100	346,950
Saratoga	1	1	..	..	8	33,100
Sour Lake	1	1	..	..	18	105,750
South Liberty	3	3	..	..	430	128,700
Spindle Top	3	2	..	1	1,975	1,180,250
W. Columbia	1	1	..	..	700	255,950
Others	..	..	..	..	....	71,150
Wildcats	13	3	..	10	4,635	....
Totals	64	42	..	22	29,753	3,285,300

EAST CENTRAL TEXAS

Corsicana—Powell	..	..	..	..	....	336,150
Currie	..	..	..	..	....	14,300
Mexia	..	..	..	..	....	216,350
Nigger Creek and Cedar Creek	..	..	..	..	....	32,750
Richland	..	..	..	..	....	17,400
Wortham	..	..	..	..	....	55,150
Wildcats	..	..	..	..	....	....
Total	..	..	..	..	....	672,100

CENTRAL-WEST TEXAS

Brown Co.	57	28	2-a	27	2,008	399,900
Callahan Co.	5	..	..	5	*	108,500
Coleman Co.	15	4	4-b	6	525	98,800
Comanche Co.	1	1	..	..	50	....
Eastland	18	5	1c	1e	295	243,200
McCulloch Co	2	..	..	2	....	....
Palo Pinto	1	..	1-d	..	....	13,800
Shackelford County	22	14	..	8	920	322,000
Stephens Co.	6	1	2e	3	50	229,550
Throckmorton	1	..	..	1	....	27,950
Young Co.	27	7	..	20	545	256,050
Others	..	..	..	..	....	18,600
Total	155	60	11	84	4,393	1,718,350

a—Includes 2,250,000 feet of gas.
b—Includes 25,750,000 feet of gas.
c—Includes 4,000,000 feet of gas.
d—Includes 3,000,000 feet of gas.
e—Includes 7,000,000 feet of gas.

WEST TEXAS

Crane County	2	2	..	..	310	*2,025,750
Crockett Co.	3	3	..	..	950	83,850
Howard Co.	7	7	..	..	940	170,600
Jones County	4	3	..	1	725	48,900
Mitchell Co.	1	1	..	..	75	94,200
Pecos Co.	19	18	..	1	102,350	2,044,200
Reagan Co.	7	7	..	..	1,705	577,800
Winkler Co.	50	44	2-a	4	198,390	5,566,550
Others	..	..	..	..	....	51,700
Wildcats	33	2	1-b	30	250	....
Totals	126	87	3	36	305,695	10,663,550

a—Includes 37,000,000 feet of gas.
b—Includes 2,250,000 feet of gas.
*—Indicates Upton County.

NORTH TEXAS

Archer Co.	43	21	..	22	910	647,050
Burkburnett	4	3	..	1	48	319,450
Clay County	..	..	..	..	....	....
Cooke Co.	5	4	..	1	125	(a)
Denton Co.	..	..	..	..	....	....
Electra	14	8	..	6	425	417,200
Jack County	2	1	..	1	10	41,950
K-M-A, Iowa Park	12	8	..	4	780	124,350
Montague Co.	7	5	..	2	120	348,000
Wilbarger Co.	40	35	..	5	20,750	799,100
Others	..	..	..	..	....	19,300
Totals	127	85	..	42	23,168	2,716,400

a—Included under Montague County.

TEXAS PANHANDLE

Carson Co.	2	..	2-a	..	....	196,700
Gray Co.	8	6	..	2	795	638,050
Hale Co.	1	..	..	1	....	....
Hutchinson County	12	9	3-b	..	1,595	1,094,450
Moore Co.	2	..	2-c	..	....	....
Motley Co.	1	..	..	1	....	....
Potter Co.	1	..	1-d	..	....	....
Wheeler Co.	1	..	1e	..	....	....
Others	..	..	..	..	....	6,900
Total	28	15	9	4	2,390	1,963,650

a—Includes 88,000,000 feet of gas.
b—Includes 160,000,000 feet of gas.
c—Includes 26,000,000 feet of gas.
d—Includes 35,000,000 feet of gas.
e—Includes 33,000,000 feet of gas.

LOUISIANA

NORTH LOUISIANA

Bellevue	..	..	..	..	....	79,900
Bossier	4	..	4-a	..	....	....
Caddo	3	3	..	..	112	399,700
Cotton Valley	..	..	..	..	....	162,700
De Soto	..	..	..	..	....	128,700
Elm Grove	..	..	..	..	....	18,600
Haynesville	..	..	..	..	....	190,700
Homer	..	..	..	..	....	135,900
LaSalle Parish	1	1	..	..	12	....
Morehouse	..	..	..	..	....	....
Ouachita	2	..	2-b	..	....	....
Pleasant Hill	..	..	..	..	....	17,900
Richland	3	..	3-c	..	....	....
Sabine	1	1	..	..	150	....
Union	5	..	5-d	..	....	....
Urania	..	..	..	..	....	225,800
Webster	6	2	4-e	..	1,280	....
Wildcats	14	..	..	14	....	....
Totals	39	7	18	14	1,554	1,359,900
S. Louisiana	20	15	..	5	8,380	858,800
Totals	59	22	18	19	9,934	2,218,700

a—Includes 74,250,000 feet of gas.
b—Includes 6,500,000 feet of gas.
c—Includes 119,000,000 feet of gas.
d—Includes 29,500,000 feet of gas.
e—Includes 79,500,000 feet of gas.

LOUISIANA GULF COAST

Bayou Boullion	..	..	..	..	....	22,500
E. Hackberry	..	..	..	..	....	174,250
Edgerly	1	1	..	..	50	34,100
Evangeline	3	3	..	..	145	33,650
Lockport	4	3	..	1	1,060	115,450
Sorrento	..	..	..	..	....	53,550
Starks Dome	1	1	..	..	2,500	....
Sulphur	..	..	..	..	....	139,800
Sweet Lake	..	..	..	..	....	125,800
Vinton	3	3	..	..	225	141,950
Others	..	..	..	..	....	17,750
Wildcats	8	4	..	4	4,400	....
Totals	20	15	..	5	8,380	858,800

Little Grey River

Casper, Wyo. — The wildcat well scheduled to be drilled on Little Grey River structure by Midwest Refining Company has been spotted on Section 36-37n-117w, in Lincoln County, just over the line from Idaho. At a cost of $20,000 a road is being built into location and material is to be moved in as soon as this work is completed. Well is to be drilled to 3500 feet or deeper, during which time it is thought that there will be about five producing horizons encountered. The company has appropriated $175,000 for this wildcat well.

"If it's worth drilling for, it's worth saving"

SSCO-STEEL *is used in* SMITH SEPARATORS

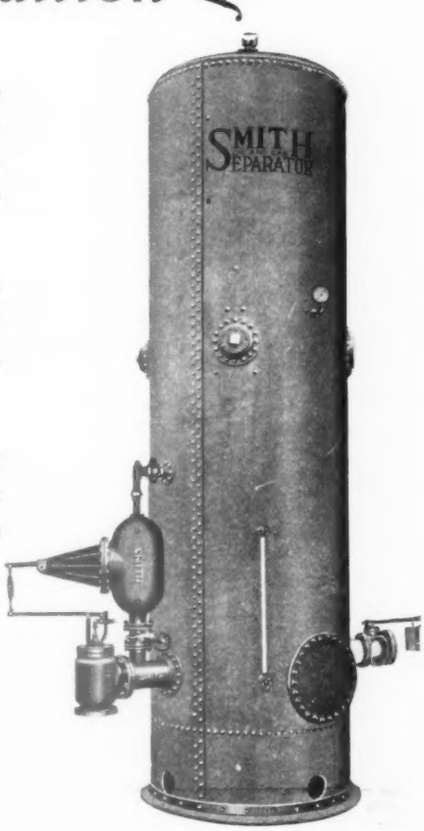
TYPE No. 1 SMITH SEPARATOR, HUMBLE OIL & REFINING CO. WINKLER COUNTY, TEXAS.

High Quality Material + Correct Design + Careful Workmanship + Conservative Rating = any field condition

The operator who chooses Smith Separators not only effects substantial savings through complete protection against fire due to the CLOSED SYSTEM of handling production, but this method actually increases the VALUE of the oil produced by making it possible to maintain original gravity of the crude.

Perhaps the biggest saving effected by Smith Separators over other types is due to the fact that it is possible to buy the type Smith Separator which represents the minimum investment for the capacity necessary to handle flush production, due to their conservative rating.

In addition, Smith Separators have unquestionably augmented their dollar-for-dollar value through the adoption of "SSCO-STEEL"—the new uniform tensile strength separator steel, exclusive with Smith Separators—at no increase in prices.



Type No. 1

SMITH SEPARATOR COMPANY

Tulsa Okla.

NEW YORK HOUSTON FORT WORTH SHREVEPORT LOS ANGELES

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1927	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
January	598,500	117,200	466,400	173,900	52,900	131,550	107,850	84,450	653,450	2,386,200	73,972,150
February	693,350	116,250	479,800	154,600	52,800	128,200	107,150	85,300	642,700	2,460,150	68,884,300
March	710,350	116,100	475,000	154,750	51,450	124,500	104,400	87,600	640,850	2,465,000	76,414,900
April	723,700	115,400	477,300	155,100	50,500	113,350	108,000	89,350	644,550	2,477,250	74,317,750
May	742,200	114,600	488,700	151,300	47,450	112,700	114,000	89,300	633,550	2,493,800	77,307,700
June	768,600	112,200	480,800	151,650	49,150	112,450	111,850	86,050	638,550	2,511,300	75,338,900
July	846,750	107,750	475,800	142,950	56,200	109,900	111,800	86,950	620,700	2,558,800	79,322,300
August	832,900	105,100	483,450	139,350	56,950	104,750	114,600	80,750	621,450	2,539,300	78,717,850
September	797,450	105,200	493,750	142,900	53,450	101,350	110,800	74,500	637,250	2,516,650	75,498,900
October	782,300	105,100	497,900	138,400	51,300	100,450	113,600	73,250	629,000	2,491,300	77,230,000
November	766,900	106,650	501,750	138,100	49,400	97,850	114,900	75,050	623,850	2,474,450	74,233,500
December	720,700	106,150	531,650	138,500	47,200	94,950	111,250	77,150	624,600	2,452,150	76,017,050
1928											
January	675,450	108,300	523,300	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June	594,850	105,200	554,400	135,400	42,350	102,850	109,300	82,400	643,400	2,370,150	71,104,500
July	587,150	102,750	597,250	133,650	42,150	90,700	113,400	80,400	644,700	2,392,150	74,156,600
August 4	592,150	103,000	610,050	133,500	41,000	87,500	113,500	81,450	642,000	2,404,150	16,829,050
August 11	604,600	102,750	592,350	130,600	40,500	87,900	113,000	80,800	636,700	2,389,200	16,704,400
Increase	12,450	.....	.....	.....	.....	400	.....	.....	.....	.....	.....
Decrease	.....	250	17,700	2,900	500	.....	500	650	5,300	14,950	104,650

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

Carson Coounty	6,700	6,650
Gray County	20,200	20.300
Hutchinson Coounty	33,300	35,700
Wheeler County	950	900
Others	550	200
Total	61,700	63,750

NORTH TEXAS

Archer County	20,350	20,500
Burkburnett	9,750	10,000
Electra	13,500	13,650
Iowa Park-KMA	3,900	4,000
Montague and Cooke Cos.	10,750	11,000
Wilbarger	36,000	32,800
Others	600	600
Total	94,850	92,500

WEST CENTRAL TEXAS

Brown County	12,100	12,200
Callahan County	3,500	3,500
Coleman County	3,450	3,300
Easteland-Desdemona	7,200	7,450
Jack County	1,800	1,500
Palo Pinto County	450	400
Shackelford County	10,650	10,850
Stephens County	7,000	7,100
Throckmorton County	950	800
Young County	7,750	8,000
Others	600	600
Total	55,450	55,700

WEST TEXAS

Crane-Upton Counties	62,600	64,150
Crockett County	3,200	3,100
Howard County	5,100	4,950
Jones County	1,700	1,600
Mitchell-Scurry Cos.	3,200	3,050
Pecos County	67,750	71,350
Reagan County	18,300	17,950
Winkler Coounty	170,250	183,800
Others	1,500	1,600
Total	333,600	351,550

EAST CENTRAL TEXAS

Corsicana-Powell	10,50-	10,550
Currie	450	450
Mexia	6,900	6,900
Nigger Creek	1,000	1,000
Richland	550	550
Wortham	1,700	1,700
Total	21,100	21,150

SOUTHWEST TEXAS

Dale	1,150	1,200
Laredo District	8,800	8,700
Luling	13,500	13,250
Lytton Springs	1,100	1,100
Somerset	700	700
Others	400	400
Total	25,650	25,350
Total Texas, outside Gulf Coast	592,350	610,050

TEXAS GULF COAST

Barbers Hill	600	750
Batson	1,400	1,400
Big Creek	3,700	3,850
Blue Ridge	6,300	7,000
Boling	2,100	2,300
Damon Mound	800	800
Goose Creek	6,800	6,800
Hull	11,800	10,400
Humble	1,400	1,350
Orange County	3,700	3,750
Pierce Junction	10,500	11,700
Saratoga	1,050	1,000
Sour Lake	3,400	3,400
South Liberty	3,600	3,700
Spindle Top	37,700	36,650
West Columbia	8,150	8,200
Others	3,400	2,250
Total	106,450	105,300
Texas Total	698,800	715,350

OKLAHOMA

North Braman	3,000	3,000
South Braman	1,450	1,500
Blickwell	3,450	3,450
Hubbard	2,650	2,600
Thomas	1,350	1,400
Tonkawa	13,100	13,350
Garber	8,350	8,400
Burbank	29,000	29,400
Osage (outside Burbank)	26,950	26,900
Cushing	20,000	19,900
Yale Jennings	7,550	7,550
Davenport	1,900	1,900
Bristow Slick	20,950	21,050
North Okmulgee	14,700	14,750
Lyons Deaner	5,850	5,850
Cromwell	9,450	9,400
Papoose	4,150	4,100
Wewoka	5,650	6,000
Seminole	50,200	50,100
Bowlegs	55,950	56,550
Searight	12,850	12,700
Little River	45,300	43,400
Earlsboro	77,250	75,700
Duncan District	7,850	7,800
Graham	5,350	5,350
Fox	1,650	1,600
Healdton	14,100	14,150
Hewitt	9,700	9,600
Scholem Alechem	15,800	15,750
Pearson	3,750	3,900
St. Louis	50,600	39,500
Allen	21,400	21,950
Others	53,350	53,600
Total	604,600	592,150

CALIFORNIA

Santa Fe Springs	38,000	38,000
Long Beach	194,000	198,000
Huntington Beach	52,000	52,000
Torrance	17,700	17,000
Dominguez	11,000	11,000
Rosecrans	6,000	6,000
Inglewood	29,700	29,000
Midway-Sunset	74,500	73,000
Ventura	53,000	53,000
Seal Beach	31,500	32,000
Others	129,700	133,000
Totals	636,700	642,000

NORTH LOUISIANA

Homer	4,350	4,350
Haynesville	5,950	6,050
Caddo Light	9,650	9,750
Caddo Heavy	3,150	3,200
DeSoto-Red River	4,050	4,050
Elm Grove	600	600
Bellevue	750	850
Cotton Valley Light	750	750
Cotton Valley Heavy	3,800	3,900
Urania	6,850	6,900
Pleasant Hill	600	600
Total North Louisiana	40,500	41,000

LOUISIANA GULF COAST

Bayou Boullion	600	500
East Hackberry	4,050	6,050
Edgerly	1,050	1,100
Evangeline	1,100	2,000
Lockport	3,450	3,600
Sorrento	1,100	1,400
Sulphur Dome	3,400	3,900
Sweet Lake	3,950	3,900
Vinton	4,450	4,500
Others	1,000	1,250
Total Louisiana Gulf Coast	24,150	28,200
Louisiana Total	64,650	69,200

ARKANSAS

El Dorado	5,250	5,400
Champagnolle	12,950	12,650
Smackover Light	7,550	7,550
Smackover Heavy	57,800	57,450
Stephens	1,050	1,000
Nevada	1,250	1,350
Lisbon	1,950	2,000
Others	100	100
Total	87,900	87,500

KANSAS

Greenwood County	28,500	28,350
Florence-Covert	1,000	1,000
Peabody-Ebling	3,250	3,200
Eldorado-Towanda	12,850	12,900
Augusta-Fox Bush	3,350	3,350
Rainbow Bend	1,550	1,550
Russell	3,950	3,600
Churchill	9,450	9,850
Oxford	10,050	10,300
Others	28,800	28,900
Total	102,750	103,000

MOUNTAIN STATES

WYOMING

Salt Creek	38,100	39,800
Grass Creek	2,400	2,450
Elk Basin	950	1,050
Big Muddy	2,700	2,700
Lost Soldier	4,000	4,050
Rock River	2,700	2,700
Lance Creek	550	600
Others	8,350	6,950
Totals	59,750	60,300

MONTANA

Cat Creek	1,700	1,650
Sunburst	8,300	8,300
Others	100	100
Totals	10,100	10,050

COLORADO

Moffats (Craig)	1,150	1,400
Fort Collins	2,600	2,700
Florence	1,350	1,100
Others	2,900	3,050
Totals	8,000	8,250

NEW MEXICO

Table Mesa	200	....
Artesia	1,100	1,100
Hogback	400	350
Rattlesnake	1,050	1,200
Others	200	200
Totals	2,950	2,850
Total Mountain States	80,800	81,450

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	113,000	113,500

PRODUCTION SUMMARY

East of Rockies	1,671,700	1,680,700
United States	2,389,200	2,404,150

WALWORTH
VALVES

—for every Oil Country purpose at all Frick-Reid Stores east of the Rocky Mountains to the Atlantic Coast. Our customers are glad we handle Walworth Valves and Walworth customers are glad Frick-Reid Stores are Walworth Headquarters. Engineers in field, pipe line and refinery may avail themselves of WALWORTH-FRICK-REID technical data and cooperation by addressing our Engineering Department at Tulsa.

FRICK REID SUPPLY CORPORATION

STORES EVERYWHERE

Tulsa, Okla. Pittsburgh, Pa.

Axelson Machine Co.
Sucker Rods, Pull Rods, Plunger Working Barrels (Pumps) etc.

Beaumont Iron Works Company
Dreadnaught Rotary Equipment Water-Cooled Drawworks, Pumping Hoists, Traveling Blocks, etc.

Donovan Boiler Works
Oil Country Boilers and Tanks.

Frick-Reid Service Belting
Rubber Covered and Friction Surface.

National Transit Pump and Machine Co.
Power and Steam Pumps.

J. P. Ratigan
Grips, Clamps, Beam Hangers.

Joseph Reid Gas Engine Company
Gas and Oil Engines, two and four-cycle, Band Wheel and Direct Drive Pumping Powers.

Whitlock Cordage Co.
Manila Cordage, including Frick-Reid Manila Bull Ropes—same quality for ten years.

Lapweld and Seamless Tubular Goods

Walworth Company
Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.

Rossendale-Reddaway Company
"Camel Hair" Beltings, Belt Clamps.

Engineering Crews
for the installation of Pumping Powers and related equipment.

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	Aug. 14 1928
New York Transit	$3.05
Bradford District	3.05
National Transit	2.90
Southwest	2.90
Eureka	2.85
Buckeye	2.65
Macksburg	2.80
Gaines	2.60
Somerset	1.55
Cabell	1.45
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.55
Keister	1.20

CENTRAL STATES

Illinois	1.55
Indiana	1.37
Lima	1.60
Plymouth	1.28

Refining Company)*

Below 25 gravity	.60
Princeton	1.55
Waterloo	1.35
Wooster	1.67

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren.

All grades	1.55

MID-CONTINENT

Carter Oil Company, Gulf Pipe Line Company, Sinclair Pipe Line Company, Prairie Oil and Gas Company and The Texas Company.*

25. to 25.9 gravity	.67
26 to 26.9 gravity	.74
27 to 27.9 gravity	.81
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.09
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.26
35 to 35.9 gravity	1.31
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 and above	1.76

*The Texas Company posts a price of 60 cents on 24 to 24.9 gravity.

MID-CONTINENT

Magnolia Petroleum Company

Below 25 gravity	.60
25 to 25.9 gravity	.67
26 to 26.9 gravity	.74
27 to 29.9 gravity	.75
30 to 30.9 gravity	.90
31 to 31.9 gravity	1.05
32 to 32.9 gravity	1.16

From 33 to 44 gravity and above, Magnolia Petroleum Company prices are the same as those of Carter Oil Company.

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude (Humble Oil and Refining Company)*

25 to 25.9 gravity	.67
26 to 26.9 gravity	.74
27 to 27.9 gravity	.81
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.09
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.26
35 to 35.9 gravity	1.31
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 and above	1.76

SOUTH TEXAS

Mirando	1.00

SOMERSET

Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 to $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

The Texas Company

MARKHAM

All grades	1.00

LULING

All grades	1.00

PANHANDLE GRAY COUNTY

(Humble Oil and Refining Company, Magnolia Petroleum Company, Gulf Pipe Line Company and Sinclair Pipe Line Company).

Below 29 gravity	.68
29 to 29.9 gravity	.75
30 to 30.9 gravity	.82
31 to 31.9 gravity	.89
32 to 32.9 gravity	.96
33 to 33.9 gravity	1.01
34 to 34.9 gravity	1.06
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.16
37 to 37.9 gravity	1.21
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.31
40 to 40.9 gravity	1.36

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated.)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Harbra	Montebello	Coyotte Hill	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	..	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.03	..	..	..	..	1.01	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.06	..	..	..	..	..	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.09	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.12	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.15	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	..	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..	..	..	..	..	..	..	..	..	..	..	..

You'll be **extra** sure of increasing business if you sell

OPALINE

REG. U. S. PAT. OFF.

the extra service Motor Oil..

If you sell a motorist Opaline, you are selling not only a good quality motor oil but you are selling *precision* in lubrication.... When a motorist drives in for motor oil you ask him his *mileage*, then you consult the Sinclair Recommendation Index and give him the grade of Opaline which fits the degree of wear in his engine and seals the power in his cylinders. That is the *extra* service Opaline gives a motorist —that is the *extra* reason why a motorist should buy Opaline and why you should sell it. It builds sound business because it gives complete satisfaction. May we tell you the details concerning this common sense method of selling Opaline Motor Oil, exclusive with Authorized Opaline Dealers?

SINCLAIR REFINING COMPANY, INC.

Also Makers of Sinclair Gasoline and H-C Gasoline

45 NASSAU STREET, NEW YORK

Atlanta Boston Chicago Houston Kansas City

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	Aug. 14 1928
41 to 41.9 gravity	1.41
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.51
44 and above	1.56

WHEELER COUNTY
(Humble Oil and Refining Company and Magnolia Petroleum Company)

Below 30 gravity	.65
30 to 30.9 gravity	.72
31 to 31.9 gravity	.79
32 to 32.9 gravity	.86
33 to 33.9 gravity	.91
34 to 34.9 gravity	.96
35 to 35.9 gravity	1.01
36 to 36.9 gravity	1.06
37 to 37.9 gravity	1.11
38 to 38.9 gravity	1.16
39 to 39.9 gravity	1.21
40 to 40.9 gravity	1.26
41 to 41.9 gravity	1.31
42 to 42.9 gravity	1.36
43 to 43.9 gravity	1.41
44 and above	1.46

CARSON-HUTCHINSON COUNTIES
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Pipe Line Company)

Below 32 gravity	.69
32 to 32.9 gravity	.76
33 to 33.9 gravity	.81
34 to 34.9 gravity	.86
35 to 35.9 gravity	.91
36 to 36.9 gravity	.96
37 to 37.9 gravity	1.01
38 to 38.9 gravity	1.06
39 to 39.9 gravity	1.11
40 to 40.9 gravity	1.16
41 to 41.9 gravity	1.21
42 to 42.9 gravity	1.26
43 to 43.9 gravity	1.31
44 and above	1.36

WEST TEXAS
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*

Crane-Upton, Crockett, Pecos and Winkler Counties, all grades .65

*Gulf does not post in Winkler County; Magnolia posts in Crane, Upton and Winkler Counties and that part of Glasscock not included in the Chalk field. The Marland Company posts only in Crane, Upton and Crockett Counties; Southern posts only in Crane, Upton and Winkler Counties.

(Magnolia Petroleum Company)

Mitchell County	$ .80
Howard-Glasscock County (shallow)	.80
Howard-Glasscock County (deep)	.65

Col-Tex Refining Company

Howard and Mitchell Counties	$ .80

WYOMING-MONTANA
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.48
Grass Creek	1.48
Rock Creek	1.33
Lost Soldier	.95
Lance Creek	1.48
Mule Creek	1.10
Notches	.65
Big Muddy	1.33
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.33
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	$1.65
Cat Creek	1.33
Lake Basin	2.20

NEW MEXICO

	Aug. 14 1928
Artesia	1.08
Hogback	1.38

CANADA

Oil Springs	2.07
Petrolia	2.00

NORTH LOUISIANA
(The Texas Company)

24 to 24.9 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.75

LOUISIANA-ARKANSAS
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley**
(Atlantic Oil Producing Company, Standard of Louisiana, Magnolia Petroleum Company and The Texas Company).

	Aug. 14 1928
27 to 27.9 gravity	.81
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.09
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.26
35 to 35.9 gravity	1.31
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 gravity and above	1.76

*Shreveport-Eldorado's postings stop at above 40 gravity.

**Below 36 gravity, the posting on Cotton Valley is 75 cents. From 36 to 52 and above the regular gravity schedule is followed.

STEPHENS
(All Companies)

Below 28 gravity	.75
28 to 28.9 gravity	.79
29 to 29.9 gravity	.83
30 to 30.9 gravity	.87
31 to 31.9 gravity	.91
32 gravity and above	.95

SMACKOVER
(All Companies)

Below 24 gravity	.75
24 and above	.90
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.85
Calion	.75

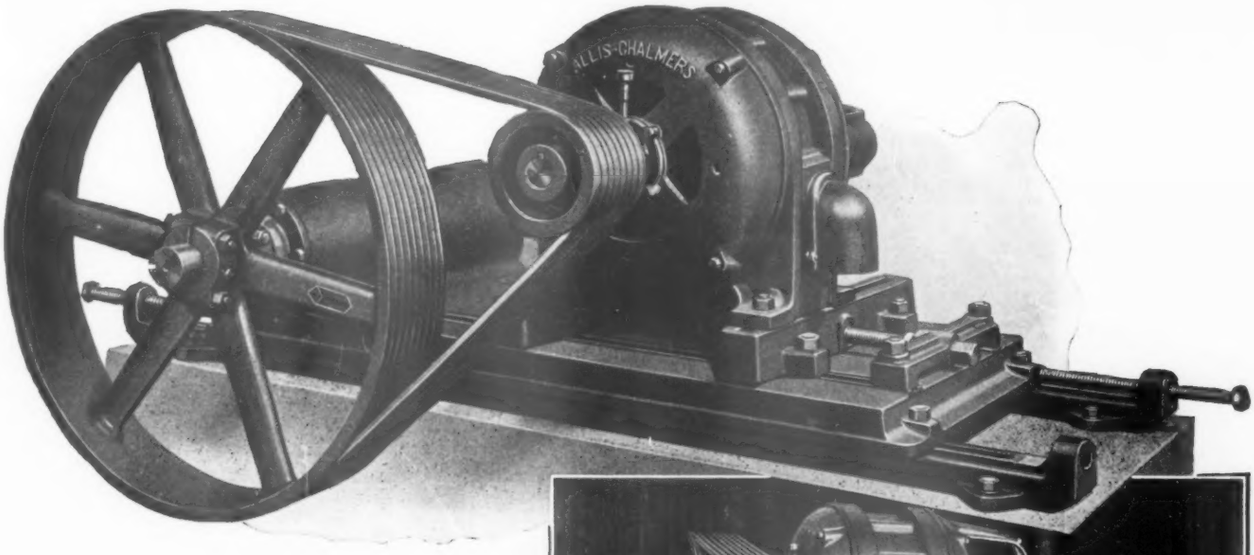
IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS
American Petroleum Institute Figures (Barrels of 42 gallons)

	Total Month July	Total Month June	Week Ended Aug. 4	Week Ended July 28
AT ATLANTIC COAST PORTS—				
Baltimore	728,000	747,000	203,000	153,000
Boston	451,000	367,000	.....	71,000
New York	3,469,000	3,596,000	929,000	890,000
Philadelphia	1,168,000	1,250,000	243,000	241,000
Others	665,000	579,000	140,000	.....
Total	6,481,000	6,539,000	1,515,000	1,355,000
Daily Average	209,065	217,967	216,429	193,571
AT GULF COAST PORTS—				
Galveston District	290,000	55,000	70,000	85,000
New Orleans and Baton Rouge	775,000	467,000	303,000	175,000
Port Arthur and Sabine District	.....	65,000	.....	.....
Tampa	24,000	.....	.....	19,000
Total	1,089,000	587,000	373,000	279,000
Daily Average	35,129	19,567	53,286	39,857
AT ALL UNITED STATES PORTS—				
Total	7,570,000	7,126,000	1,888,000	1,634,000
Daily Average	244,194	237,534	269,715	233,428

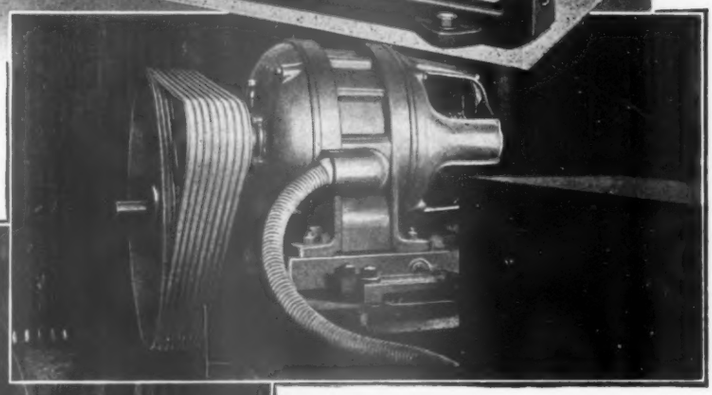
RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS
American Petroleum Institute Figures (Barrels of 42 Gallons)

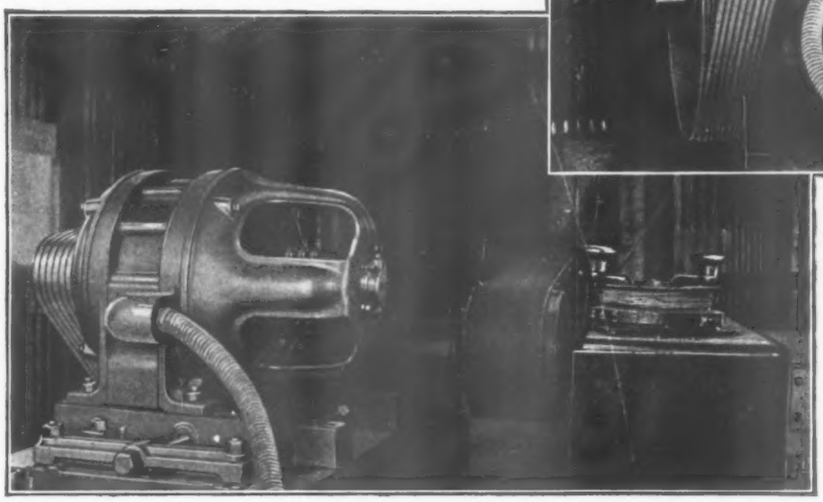
	Total Month July	Total Month June	Wk. Ended August 4	Wk Ended July 28
AT ATLANTIC COAST PORTS—				
Baltimoore	614,000	354,000	71,000	....
Boston	90,000	....	....	....
New York	272,000	701,000	248,000	....
Philadelphia	633,000	591,000	237,000	239,000
Others	76,000	(a)351,000	....	....
Total	1,685,000	1,997,000	556,000	239,000
Daily Average	54,355	66,567	79,429	34,143
AT GULF COAST PORTS—				
Daily Average	.....	.....	.....	.....
Total—Atlantic & Gulf Coast Ports	1,685,000	1,997,000	556,000	239,000
Daily Average	54,355	66,567	79,429	34,143
Distribution of Total California Oil Receipts is as follows:				
Crude	248,000	159,000	80,000	78,000
Gasoline	1,290,000	1,496,000	331,000	161,000
Gas Oil	71,000	76,000	145,000	.....
Fuel Oil	76,000	81,000	.....	.....
Kerosene	.....	95,000	.....	.....
Tops	.....	90,000	.....	.....
Total	1,685,000	1,997,000	556,000	239,000

(a) Revised.



Standard Sizes: 15/35, 20/50 and 25/65 H. P.
Stock at Tulsa, Houston and Sweet Water.





The unit consists of an Allis-Chalmers steel frame, double rated oil well motor; a Texrope Drive which acts as the power transmitting medium; a cast iron base with Timken bearing housings cast integral; and universal slide-rails permitting the use of any size and any type motor.

Shock-Proof Reduction—*with Texropes*

The Allis-Chalmers Texrope driven single reduction unit provides that necessary flexible medium of power transmission between the prime mover and the countershaft which is so vital to decrease to a minimum the effect of the shock loads, encountered either during drilling or pumping, on the prime mover.

This unit can be used with any type motor up to 75-horsepower. It has a salvage value of practically 100%. The slide rails permit a belt take up of 16 inches allowing a 32-inch stretch in the belt drive from the countershaft to the band wheel. Write our nearest oil field office for particulars as to the application and efficiency of this unit.

ALLIS-CHALMERS MANUFACTURING CO.

MILWAUKEE, WISCONSIN.

DALLAS — HOUSTON — KANSAS CITY — NEW ORLEANS — DENVER — LOS ANGELES — SAN FRANCISCO
WESTERN SUPPLY CO., TULSA, OKLAHOMA

Say you saw it in The OIL WEEKLY

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	5	..	3	..	1	..	1	..	540	...
California	13	12	11	12	..	..	2	..	9,270	18,625
Illinois	3	2	3	1	..	..	..	1	27	7
Indiana	1	5	1	4	..	..	..	1	100	68
Kansas	13	14	2	5	6	3	5	6	125	690
Kentucky	20	31	10	21	1	1	9	9	175	924
Louisiana	6	8	1	3	3	..	2	5	15	1,810
Michigan	2	5	2	3	..	2	..	..	140	490
Ohio	45	21	13	11	16	1	16	9	162	203
Oklahoma	65	61	28	37	8	8	29	16	2,164	6,210
Pennsylvania	1	2	..	2	1	..	..	..	...	8
Tennessee	..	1	..	1	..	..	..	..	...	400
Texas	103	139	55	91	4	7	44	41	77,416	257,220
West Virginia	19	29	5	8	9	16	5	5	58	99
Total	296	330	134	199	49	38	113	93	90,192	286,754
Increase this week	..	..	..	..	11	..	20	..	...	...
Decrease this week	34	..	65	..	..	..	..	..	196,562	...

KANSAS

Company, well and Location	Initial Production Bbls.	Depth
BARBER COUNTY—		
Shaffer O. & R. Co. et al, Boggs 1, 19-33-12w	*	6185
BUTLER COUNTY—		
Dixie Oil Co., Stearns 1, 28-27-6e	100	3063
COWLEY COUNTY—		
Sam Elliott, Shannon 1, 18-31-5e	¶¾	492
Roth & Faurot, Werner 1, 31-32-6e	¶2	2447
J. A. Hull Co., Lehrman 1, 13-32-4e	*	3455
CHAUTAUQUA COUNTY—		
Page Bros., Green 1, 18-32-10e	25	2355
Union Gas Co., Bonuour 1, 2-32-10e	*	2060
ELK COUNTY—		
Sooner Gas Co., Webb 1, 10-31-10e	¶½	1170
Denman Bros., Lewis 4, 35-31-10e	¶½	1693
McPHERSON COUNTY—		
Sinclair, Clark 1, 31-18-2w	¶4½	2990
Polar Oil Co., Gray 1, 20-20-3w	*	3830
RUSSELL COUNTY—		
Douglas Oil Co., Stoffel 1, 25-14-11w	*	3503
SUMNER COUNTY—		
Champlin Ref. Co., Latta B-4, 9-30-2w	¶½	1929

OKLAHOMA

Company, well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Hall & Briscoe, Miller 2, 29-1s-3w	105	3227
Magnolia, Lewis 3, 23-1s-3w	85	2400
Brooks 2, 11-2s-3w	*	4000
Brooks 1, 11-2s-3w	*	4695
COMANCHE COUNTY—		
Stephens et al, Tomlinson 1, 27-2n-12w	*	1209
COTTON COUNTY—		
Moore et al, Cobb 1, 2-2s-10w	50	2160
Everts et al, Indian 1, 11-5s-13w	*	2318
CREEK COUNTY—		
Winemiller et al, Abraham 1, 5-16-10e	10	2341
O. M. Irelan, Taconey 3, 11-17-10e	*	1995
J. H. Markahm, Jr., Beesley 4, 20-17-7e	*	2885
GARFIELD COUNTY—		
Champlin Ref. Co. & Marland, Stoner 1, 24-24-3w	*	4185
Fagar Oil Co., Garsuch 1, 14-24-3w	*	4767
GRADY COUNTY—		
Kahl et al, Petty 2, 14-4n-8w	¶4	2285
HUGHES COUNTY—		
Magnolia, Jetty 1, 21-7-8e	70	3095
JEFFERSON COUNTY—		
McGinley & Sigler, Clark 3, 17-7s-5w	20	792
Lesh & McCall, Peniston B-6, 17-7s-5w	20	790
Pensiton A-5, 17-7s-5w	15	806
Birdwell et al, Trout 1, 10-7s-6w	*	2207
JOHNSTON COUNTY—		
Wirt Franklin Pet. Corp., Foster 1, 35-4s-4e	*	1375
KAY COUNTY—		
Nehr & Wilson, Tieman 1, 20-27-1e	*	925
Charles Ralph et al, Patenburg 1, 18-29-1w	*	4048
LOGAN COUNTY—		
Barnsdall DeJarnett 1, 19-19-4w	*	4450
MAYES COUNTY—		
Bradley & Reynolds, Bruster 1, 3-21-18e	*	270
MUSKOGEE COUNTY—		
L. T. Haney, Webber 1, 17-14-20e	¶2	960
W. L. Ransome et al, W. Robinson 1, 1-13-18e	*	1646
NOBLE COUNTY—		
Mid-Co. Oil Co., Reed 6, owdd, 29-24-1w	*	2020
National Oil Co., Bellman 1, 32-24-1w	*	....
OKMULGEE COUNTY—		
W. B. Pine, Henry 3, 30-12-13e	¶¼	1193
F. J. Lambert, Steigler 1, 7-13-15e	6	1250
A. G. Hazlett, Tucker 6, 2-13-14e	¶3½	1973
Riney & Williams, Love 4, 9-14-14e	15	1256
Kirkland & Sons, Bell 9, 17-15-13e	9	1364
Bettie Gene Oil Co., Carruth 1-A, 19-13-14e	*	450
Denton & Marshall, Tiger 2, 30-15-13e	*	2140
OSAGE COUNTY—		
Okla. Nat. Gas Corp., No. 787, 10-21-10e	¶2	960
Clint Moore & Osage Oil Co., No. 6, 9-21-9e	2	398
I. T. I. O. Co., No. 393, 29-23-9e	¶¾	905
No. 397, 4-23-9e	¶3¾	550
Winona Oil Co., No. 24, 28-24-10e	8	1374
Peters Pet. Co. & P. & R. Co., No. 2, 27-25-9e	25	2240
Kewanee O. & G. Co., No. 8, 34-27-6e	68	2837
C. O. Ross, No. 8, 14-29-11e	5	1063
Continental Oil Co., No. 1, 32-24-8e	*	2689
PONTOTOC COUNTY—		
Ramsey, Millner 4, 18-5-8e, owdd	350	2598
Homaokla Oil Co., McCall 4, owdd, 17-5-8e	70	2359
POTTAWATOMIE COUNTY—		
Magnolia, Ship 1, 19-7-5e	50	3985
Harper 2, 19-7-5e	12	4420
Davis 2, 15-7-4e	12	4065
SEMINOLE COUNTY—		
Anderson & Pritchard, Culley 4, 18-5-8e	500	2645
Mid-Cont. Harjo 2, 14-5n-7e	107	2591
Sinclair, Wyetka 1, 13-5-7e	¶5	2672
Continental, Cosar 1, 25-8-6e	375	4396
Mid-Cont., Fleet 14, 7-5n-8e	*	....
STEPHENS COUNTY—		
Harry Muse, Branch 2, 1-2s-8w	50	2153
Magnolia, Burke 7, 34-1s-8w	40	1949
Big Twelve Oil Co., Taliaferro 9, 27-1s-8w	10	1400
Wirt Franklin Pet. Corp., Drake B-1, 12-1s-4w	75	3276
Medlin et al, McGuire 1, 27-2s-8w	*	2500
Magnolia, Corbin 2, owdd, 12-2s-5w	*	2370
Beaver Oil Co., Funk 1, 30-1n-8w	*	2040
Atlantic, Peddycourt 1, 25-1s-4w	*	3282
TULSA COUNTY—		
W. B. Pine, Davis A-1, 9-16-14e	*	1727
Commercial Drilling Co., Ishmail A-1, 24-18-12e	*	2188
Underwood et al, Brown 5, 30-19-12e	*	1585
WAGGONER COUNTY—		
A. K. Creighton, Childers 4, 22-18-17e	*	330

EASTERN STATES

PENNSYLVANIA

Company, well and Location	Initial Production Bbls.	Depth
GREENE COUNTY—		
McCracken & Fay, Gray 1	¶¾	....

WEST VIRGINIA

Company, well and Location	Initial Production Bbls.	Depth
RITCHIE COUNTY—		
Beall & Bickerstaff, Wagner 1	¶½	....
Reno Oil Co., Cunningham 2	*	....
Carnegie Nat. Gas Co., Daugherty 2	*	....
M. S. Young, Snyder 1	25	....
ROANE COUNTY—		
Chartiers Oil Co., Shaffer 1	¶1¼	....
South Penn Oil Co., Stockley 74	25	....
Aetna O. & G. Co., Ross 1	*	....
CALHOUN COUNTY—		
Martin Crowley, Shaffer 4	¶1¼	....
G. L. Cabot, Leach 2	¶1½	....
Great Elk Oil Co., Bachman 20	4	....
PLEASANTS COUNTY—		
Howard Hall & Co., Marshall 1	¶½	....
Edward Hall & Co., Anwell Hrs. 1	2	....
LEWIS COUNTY—		
Mudlick O. & G. Co., Davisson 5	¶1½	....
C. & A. Gas Co., Jackson 1	¶¼	4191
HARRISON COUNTY—		
Berne & Berne, Kemlick 5	¶3	2619
BRAXTON COUNTY—		
United Gas Co., Engle 2	¶1¼	....
WIRT COUNTY—		
Roberts Brothers, Rathburn 161	2	....
WOOD COUNTY—		
T. G. Mixer & Co., Cooper 1	*	....
DODDRIDGE COUNTY—		
Frank Finley & Co., Wilson 1	*	....

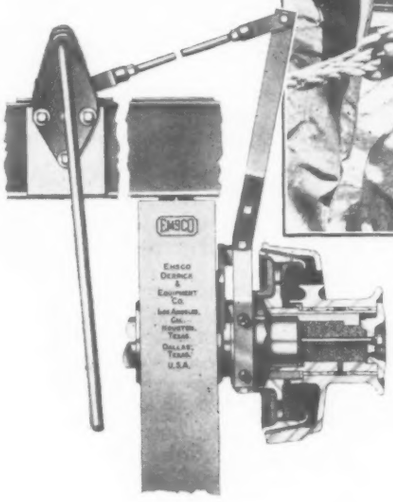
KENTUCKY

Company, well and Location	Initial Production Bbls.	Depth
OHIO COUNTY—		
C. E. Daugherty & Co., Greer 1	*	....
Cumberland Pet. Co., Hamilton 12	*	....
Daugherty & Co., Haynes 1	10	....
Porter Evans & Co., Powers 1	15	391
Wood Oil Co., Mitchell 1	15	398
Weir, Evans & Co., Deane 1	10	311
Chester Oil Co., Brandon 2	10	....
Arnold & Spaulding, Mitchell 1	*	638
Friendship Oil Co., Kelley 2	¶1½	....
Creek Drilling Co., King 6	*	....
DAVIESS COUNTY—		
D. C. Stinson & Co., Mayfield 3	20	....
Slagle 3	25	....
R. D. Hance & Co., Purcell 2	*	....
The Petroleum Co., Burns 1	30	....
Pratt & Co., Rodgers 1	15	....
Wade & Moore, Burton Hrs. 3	25	....
French & Robbins, Cook 1	*	....
Evans & Co., Norris 1	*	....
Lowman Bros., Pope 1	*	....
Monarch Oil Co., Coons 1	*	....

SOUTHEASTERN OHIO

Company, well and Location	Initial Production Bbls.	Depth
MORGAN COUNTY—		
Dr. G. W. McKaughlin, Fitch 20	*	164
Squires Bros., Kincaid 9	*	310
Sterrett & Huffines, Sterett 1	*	230
Logan Gas Co., Huffman 1	*	4644
Bauman & Co., Hilaman 28	¶½	1506
MONROE COUNTY—		
I. J. Dondon & Co., McCannon 1	2	....
Sylvania Producing Co., Grimm 2	¶¼	1940
JEFFERSON COUNTY—		
A. H. Sutton & Co., Williams 7	5	....
NOBLE COUNTY—		
W. Y. Decker, Baker 1	*	1200
WASHINGTON COUNTY—		
Hadley O. & G. Co., Hadley 19	*	1200

—there is only one friction-clutch draw-works cathead



The EMSCO friction CATHEAD

(Patent Pending)

THE FRICTION CLUTCH of the Emsco Friction Cathead enables the driller to engage or disengage the cathead at will, a feature that insures maximum safety to workman and eliminates damage to tongs and other equipment.

The driller quickly becomes adept in operating the cathead. He can speed up his line shaft, and, by applying a quick jerk on the lever, the clutch can be engaged and instantly released. (With the automatic type, once the clutch has been engaged it is necessary for the cathead to complete its cycle of operation before it can be released, unless the operator is quick enough to shut off power).

Should a joint be unusually hard to break, two or three attempts can be made with the Emsco Friction Cathead by giving the operating lever a quick tug and release, much the same as the cathead man would do when breaking-out with the cat line, on the old style of cathead. (When using catheads with a fixed distance of travel, considerable damage can be caused by snapping of tong lines or failure of other parts of the equipment.)

The Emsco Friction Cathead is entirely satisfactory in every respect. It embodies greater flexibility and faster operation, plus the maximum factor of safety, and is under instant control at all times. The clutch is of the cone type, built for long life under the most severe service conditions. Design and construction are fully up to Emsco standards. Complete information supplied on request.

EMSCO
A Complete Line of Better Oil Well Equipment

EMSCO Steel Equipped Wells Are Safe

Protected by Steel

EMSCO DERRICK & EQUIPMENT COMPANY
LOS ANGELES, CALIF., HOUSTON, TEXAS-DALLAS, TEXAS
U. S. A.
EXPORT OFFICE: 150 BROADWAY
NEW YORK CITY, N. Y.
U. S. A.

CENTRAL OHIO

Company, well and Location	Initial Production Bbls.	Depth
PERRY COUNTY—		
R. C. Miller & Co., Hughes 1	53	3549
Henry Scholl & Co., Milligan 1	*	3575
R. G. Donley & Co., Deaver 1	¶1	....
Dun Marr Oil & Gas Co., Ewing 1	*	2904
Allegheny Oil Co., Bennett 2	2	....
ATHENS COUNTY—		
Ohio Fuel Gas Co., Elliott 3	¶½	1620
Logan Gas Co., Maston 1	¶½	....
Coal Run O. & G. Co., Mulligan 1..	*	....
Cook & Co., Hall 1	¶¼	....
MEIGS COUNTY—		
Ohio Fuel Gas Co., Easterday 1	4	....
Tyree & Co., Carnahan 1	6	....
Ohio Fuel Gas Co., Mayhugh 1	¶1	....
Rood & Palmer, Morrison 1	1	....
ASHLAND COUNTY—		
Albert Kabe & Co., Barnhart 2	6	....
Kromer & Co., Griffith 1	2	706
Robinson & Co., Funk 1	*	....
Logan Gas Co., Mitchell 1	*	....
LICKING COUNTY—		
Ohio Fuel Gas Co., Billman 1	¶¼	....
Brown Bros., Chapin 6	14	826
JACKSON COUNTY—		
Ohio Fuel Gas Co., Peters 1	¶1½	....
Kemroy, Inc., Janet Roys & Co. 4..	¶1¼	2712
MEDINA COUNTY—		
Ohio Fuel Gas Co., Johnson 1	¶½	....
Steck 1	¶½	....
WAYNE COUNTY—		
The Logan Gas Co., Yoder 1	*	....
Ohio Fuel Gas Co., Kline 1	¶3¼	....
STARK COUNTY—		
Cashdollar & Co., Yobadah 1	¶1	....
F. A. Brendall & Co., McCaughey 1	*	....
GUERNSEY COUNTY—		
Miller & Jewell, Fordyce 1	20	3590
COSHOCTON COUNTY—		
Bell Bros., Walters 1	¶¼	632
CARROLL COUNTY—		
Jupiter Oil Co., Brown 1	¶2¼	1019
HOLMES COUNTY—		
Ohio Fuel Gas Co., Weaver 1	*	4197
HOCKING COUNTY—		
Kachelmacher Estate, McLain 3	*	....
VINTON COUNTY—		
Co-operative Oil Co., Beckley 7	¶¼-7	....
GALLIA COUNTY—		
Ohio Fuel Gas Co., Mink 1	*	....

NORTHWESTERN OHIO

Company, well and Location	Initial Production Bbls.	Depth
ALLEN COUNTY—		
C. A. Peavey, Lenney 8	40	1358

INDIANA

Company, well and Location	Initial Production Bbls.	Depth
GIBSON COUNTY—		
Mann & Huber, Hutchinson 8	100	1430

ILLINOIS

Company, well and Location	Initial Production Bbls.	Depth
CRAWFORD COUNTY—		
Silurian Oil Co., Petty 1	22	1500
Farnsworth & Co., Miller 1	3	....
Dinsmoor Oil Co., Stentz 1	2	1005

MICHIGAN

Company, well and Location	Initial Production Bbls.	Depth
MUSKEGON COUNTY—		
Muskingum Dev. Co., Hartman 2	90	1648
Paragon Oil Co., Kooi 1	50	1660

CALIFORNIA

Company, well and Location	Initial Production Bbls.	Depth
HUNTINGTON BEACH—		
Standard Oil Co., Bolsa 22	60	4553
INGLEWOOD—		
Standard Oil Co., B-C 64	25	2120
LONG BEACH—		
Calif. Eastern Oil Co., Marine 26	500	6702
Herndon Pet. Corp., No. 7	2000	6478
Shell Co., Pala 2	1200	6966
Texas Co., Schilling 5	2000	6595
MIDWAY—		
Richfield Oil Co., No. 7, 6-32-23..	*	1351
Western Prod. Co., No. 1, 21-31-22..	25	1007
MT. POSO—		
Texas Co., Glide 2-3, 15-27-28	360	1639
RINCON—		
Southern Pacific Land Co., No. 1..	600	3725
Southern Pacific Land Co., No. 5..	1100	3800
VENTURA—		
Associated Oil Co., Lloyd 100	1400	7957

ARKANSAS

Company, well and Location	Initial Production Bbls.	Depth
CHAMPAGNOLLE—		
Lion Oil Ref. Co., Kelly 1, Sec. 9-17-14	¶3-40	3175
Magnolia, Gregory 1, 15-17-14	¶30	2852
Magna Prod. Co., Townsend 3, 10-17-14	200	3250
Townsend 7, 10-17-14	300	3241
C. M. Jones, Stegall 1, 10-17-14	*	3505

NORTH LOUISIANA

Company, well and Location	Initial Production Bbls.	Depth
COTTON VALLEY—		
Humble, Cox 4	¶25	4640
Magnolia, Cox 3	¶30	4663
DESOTO PARISH—		
R. R. Roy, Jesse Fuller 1, Sec. 6-13n-13w	¶20	2827

SOUTH LOUISIANA

Company, well and Location	Initial Production Bbls.	Depth
EDGERLY—		
C. M. Crotty, Lillard 13	15	2330
EVANGELINE—		
The Texas Co., Rayne 3	*	5090

TEXAS GULF COAST

Company, well and Location	Initial Production Bbls.	Depth
BATSON—		
Gulf, Wing 155	4	1365
BLUE RIDGE—		
Watts Bros. Oil Co., Blakely 6	500	3780
GOOSE CREEK—		
Humble, Gillard 51	10	2160
HULL—		
The Texas Company., Carr 1	*	3790
Empire G. & F. Co., Barngrover 29..	75	3025
SOUR LAKE—		
Gilbert Oil Co., Fee 103	15	480
SPINDLE TOP—		
Gulf, Gladys 229	30	785

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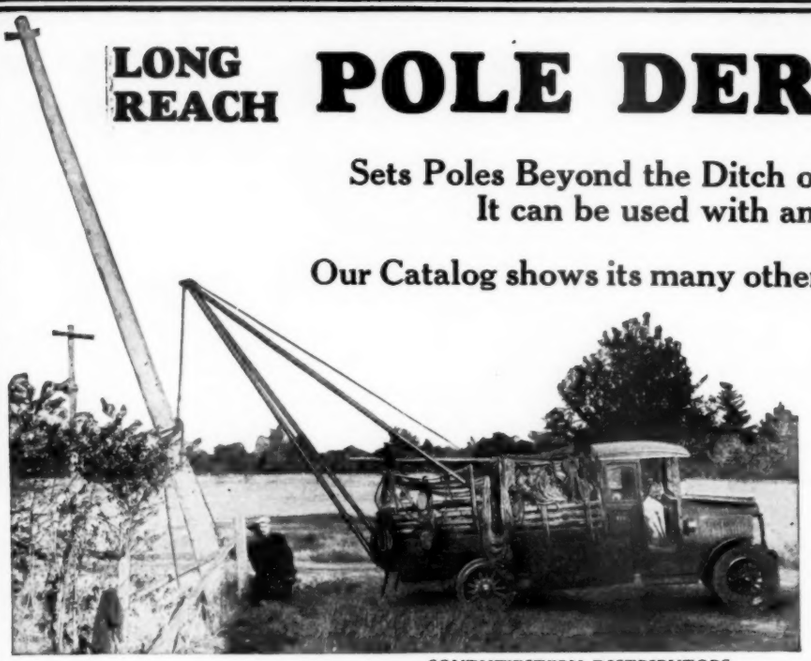
Sets Poles Beyond the Ditch or Over the Fence.
It can be used with any Winch.

Our Catalog shows its many other Exclusive Features.



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Mr. S. B. Daugherty

MR. S. B. DAUGHERTY is well known to many natural gas men as a designer and technical gas man. He started with us away back in 1898, assisting in the design of the first thousand horsepower gas engines built in this country. These engines are still in daily use, compressing natural gas.

Then he left us, and in 1916 was again in responsible charge of the design of the largest gas engines in this country, i. e., 46 x 66″ Twin Tandem, 4,500 H.P., double acting engines driving A.C. generators.

Since then he has been more or less of a free-lance designer and consulting engineer. These years have been spent in designing gas compressors and in intimate contact with gas men and their problems.

We were so much impressed by Mr. Daugherty's success in gas engine compressor design that we retained him several years ago to develop a 17 x 24″, 170 H.P. gas engine compressor for us, embodying the very latest from the ground up.

Results never before achieved have been obtained in this 17 x 24″ gas engine compressor, and yet the price is in line with the competition.

The engine is very efficient and economical.

We are making every effort to see that our new catalog on this engine reaches every interested natural gas man. If you have not received the catalog by the time this appears, will you please co-operate with us and write for it, using the coupon.

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Oil City, Pa.

Date.....

Please send me your catalog on your 17 x 24″ Gas Engine Gas Compressor designed by Mr. Daugherty.

Name ..... Position .....

Address .....

WEST TEXAS

Company, well and Location	Initial Production Bbls.	Depth
HOWARD COUNTY—		
Bristow & Merrick, Hooks 7	195	1903
J. S. Cosden & Co., Inc., Roberts 1-A	2400	3107
McGinley-Sigler-Henshaw et al, Eason-Settles 1	1500	2210
JONES COUNTY—		
Robert Oil Corp. & Cosden & Co., Grayson 3	400	2540
PECOS COUNTY—		
Gulf Prod. Co., I. G. Yates 12	12,310	1331
Mid-Kansas-Transcontinental, Smith-Taylor 16	15,840	1635
Smith-Taylor 18	8160	1725
I. G. Yates 24-A	1920	1678
WINKLER COUNTY—		
Atlantic Oil Prod. Co., Ida Hendrick 2	550	3058
Pure Oil Co., Grisham-Hunter 5-B	300	2996
Roxana Pet. Corp., Grisham-Hunter 5-A	750	2851
Roxana & Texas Co., Grisham-Hunter 5	12,000	2852
T. G. Hendrick 1-B-A	15,000	2843
Southern Crude & Dixie Oil Co., Ida Hendrick 4-E-T-67	1100	3022

CENTRAL WEST TEXAS

Company, well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
Baker-Hodge et al, Marr 1	20	1220
Bradstreet et al, Woolridge 1	*	1294
Brown et al, Shore 1	*	1330
Cranfill & Reynolds, Kellar 1-B	*	1255
Heatley et al, Kilgore 1	*	803
Hodges et al, Fry 1	*	1260
Humble O. & R. Co., Kilgore 1	35	1192
Phillips Pet. Co., Dabney 1	¶1	1174
Schmidt et al, Strange 1	*	1007
Sinclair O. & G. Co., Eubanks 5	20	1272
CALLAHAN COUNTY—		
Dees et al, Dyer 1	*	1047
Dickey Oil Co., Williamson 2	*	712
Swoveland et al, Gilliland 1	*	965
COLEMAN COUNTY—		
Charter Oil Co., Crump 3	50	1870
Cunningham et al, Self 1	*	2330
Manhattan Oil Co., Over all 2	120	2314
O. H. Shoup Jr. et al, Thornton 1	*	1845
EASTLAND COUNTY—		
Operators O. & G. Co., Williamson 2	¶¼-10	3515
ERATH COUNTY—		
Weatherall et al, Hill 1	*	3365
PALO PINTO COUNTY—		
Craig & Strong, McAvoy 1	*	1535
SHACKELFORD COUNTY—		
Callahan et al, Nail 4	*	1628
Kingwood Oil Co., Gorsuch 1	*	2097
Roeser-Pendleton et al, Cook 75-A, (Sec. 60)	45	1188
Cook 6-A, (Sec. 61)	300	1350
Tannehill et al, Myer 7	*	1255
STEPHENS COUNTY—		
The Texas Co., Hamil 3	10	4127

NORTH TEXAS

Company, well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
Arco Oil Co., Perkins 6	15	1020
Barnsdall Oil Co., T. B. Wilson 1-C	65	1707
A. W. Johnston et al, Garvey 1	*	852
Pandem Oil Corp. et al, Young 1	*	1555
Stump & Hines, Perkins 7	40	1007
COOKE COUNTY—		
W. J. Green et al, Thomas 1	*	1102
ELECTRA—		
Hammon & Garrett, McCarty 2-D	40	1368
HARDEMAN COUNTY—		
Milham Corp., Reeves 1	*	4520
K-M-A AND IOWA PARK—		
Aiken & Rayzor, S. W. Wigley 1	*	1852
C. W. Clark et al, Allen-Kemp 1	*	1782
Allen-Kemp 2	7	483
Pink Hammond et al, Munger 2, (Lot No. 30)	*	1786
Harry Hines et al, Griffin 1	*	1928
Waggoner Bros. 3	150	1390
W. B. Omohundro et al, Pace 14	40	1230
L. E. Trout & Lambert, K.&K. 2	*	1819
MONTAGUE COUNTY—		
Bridwell Oil Co., Salmon 2-D	15	902
W. H. Godfrey et al, Campbell 1	*	2000
THROCKMORTON COUNTY—		
Simmons et al, Thomas 1	*	1753
WILBARGER COUNTY—		
Baker et al, Waggoner 1-C	130	1902
Barkley-Meadows, Waggoner 2-D	50	1893
Burton et al, Waggoner 1	*	2554
Consolidated Oil Co., Waggoner 10-A	40	1878
E. B. Lawson et al, Waggoner 9-B	20	2431
Manhattan Oil Co., Waggoner 1-B	*	2460
Staley-Wynne & Co., Waggoner 1-F	400	2417
The Texas Co., Waggoner 356	200	2410
Waggoner 7-E	700	2419
YOUNG COUNTY—		
Herbert Oil Co. (was Lyman et al) Davis 1	430	3356
Harry Hines et al, Kunkle 1	*	1256
Rogers 1	*	1001
Paull Oil Co., Allen 1	125	2096
Prairie O. & G. Co., Campbell 1	75	980
Shappell Oil Co., Garrett 1	5	622
Westerfelt & Noble, Graham 8-B	*	4240
Wichita Prod. Co., Hamilton 5	20	1019
Wolfe et al, Whitehead 2	*	930
World Oil Co., State 1	*	600

TEXAS PANHANDLE

Company, well and Location	Initial Production Bbls.	Depth
CARSON COUNTY—		
Empire Gas & Fuel Co., Sheridan 1	¶25	3632
GRAY COUNTY—		
Tobias Oil Co., W. H. Taylor 1	15	3170
Travis & Smith, Chapman 1	*	3054
HUTCHINSON COUNTY—		
Gulf Prod. Co. & Panhandle Ref. Co. Dial 43	50	2984

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Note These Exclusive Features:

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b—Set screws fully protected—cannot be broken off.
c—Reinforced cap, or shoulder to receive blows, protects set screws, hold-down plate and liner.
d—Handle guard to protect workmen's hands.
e—Loop type handle prevents losing slips in the hole.
f—Guide bevel makes it easy to slip them into place in the Kelly bushing.

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The new H & W Rotary Slips will successfully withstand all the abuse that any service can give them. Hard knocks, or sledge hammer blows will not damage them. Screws cannot be broken off. Hold-down plates, liners or slips cannot be lost. Ask us for complete information in detail.

Made in all previous sizes, also now a regular 5" size to be used with 5" liner.

Sizes: for 6", 5" and 4" drill pipe, with renewable liners to fit all sizes down to 2½". Casing sizes, as required. Special sizes made to order.

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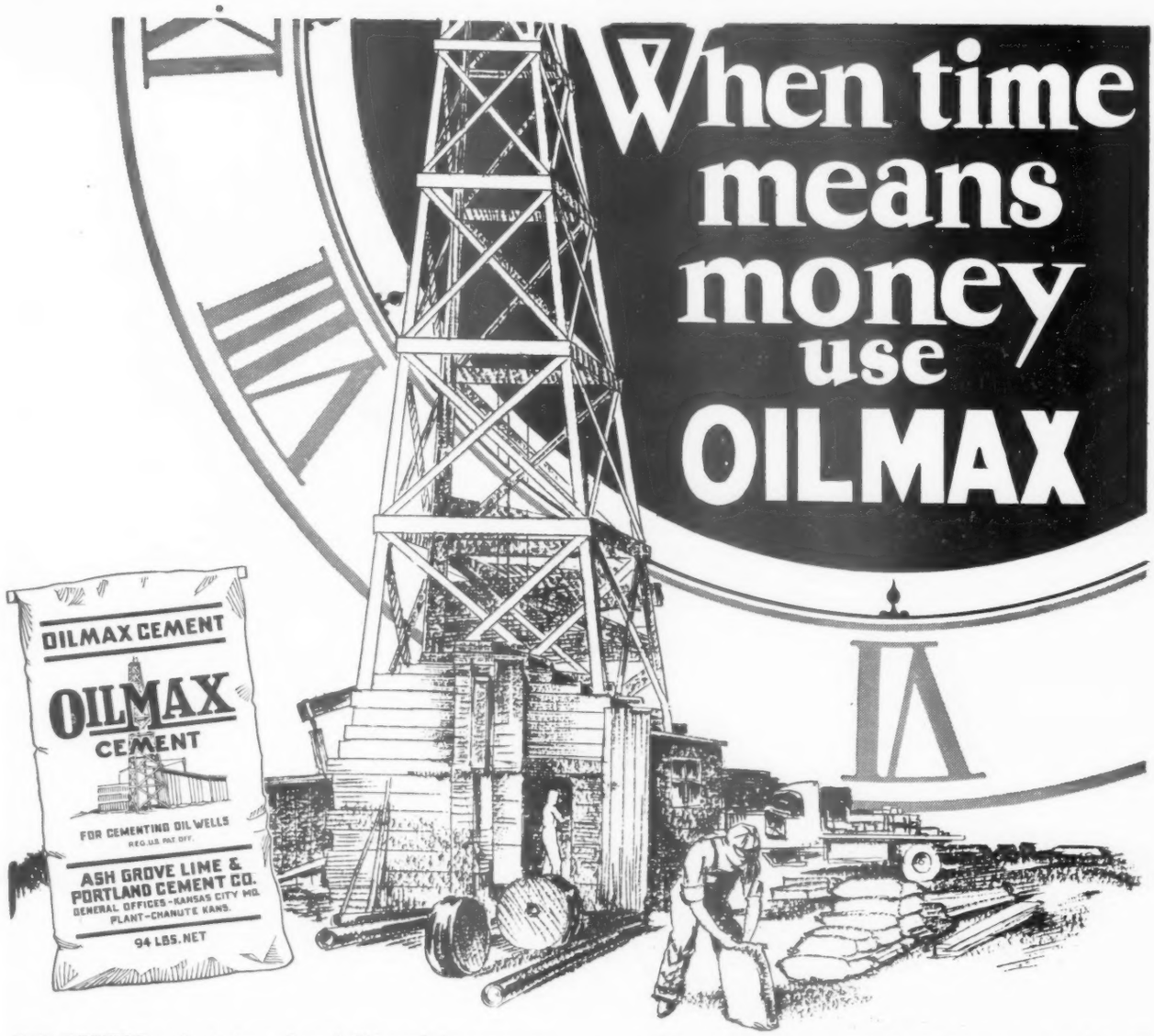

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You can resume drilling operations 48 hours after your casing has been set with Oilmax! It eliminates costly delays when used in shutting off water, straightening crooked holes, plugging back, cementing off lost tools, filling cave-ins or caves and all difficult bottom hole work. Because, used neat only, it gets as hard in 24 hours as Portland Cement in ten days—*and requires no admixtures or accelerators.* With a uniform mix, made easy because only water is added, weak or soft spots are eliminated.

Oilmax is specially compounded to set up normally in salt water or water containing oil, sodium chloride, magnesium chloride or calcium sulphate. But it is *not* quick setting. It takes its initial and final set just like Portland Cement, allowing ample time for mixing and placing, no matter how deep the hole.

Oilmax is a true Portland Cement, meeting all Govt. and A. S. T. M. specifications. It is unusually plastic, slips easily and quickly and works equally well in bailer and pump.

Available through dealers--You can secure Oilmax Cement through legitimate retail dealers. Packed in sturdy 5-ply paper bags, it may be shipped in mixed cars with Ash Grove Portland Cement or Quikard Cement. If your dealer doesn't stock it, write us for complete information.

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District Sales Office: OKLAHOMA CITY, OKLA.
Petroleum Bldg., Phone Maple 0642.

OILMAX CEMENT

19

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending Aug. 11	Prev. ious week	Total this month	Total this year	This week last year	This month 1927	Total same date 1927	Year total 1927
Arkansas	....	....	....	256	7	15	241	329
Californonia	27	15	42	645	17	35	863	1,226
Louisiana	17	7	24	440	20	31	446	812
Kansas	18	24	42	668	....	15	636	972
Oklahoma	66	88	154	2,216	....	88	2,616	3,702
Texas	164	128	292	4,941	102	200	6,132	8,665
Mt. States	....	....	....	....	....	....	340	494
Total	292	262	554	9,166	146	384	11,274	16,149

KANSAS

BUTLER COUNTY — Garden et al, Sluss 1-C, se nw ne 6-27-6e. Dixie Oil Co., Stearns 2, nw sw se 28-27-6e.

COWLEY COUNTY — Kentucky Hydrogen & Oxygen Co., Hoyt 1, ne se sw 7-33-7e; Townsite 4, nw sw 18-33-7e.

CHAUTAUQUA COUNTY — Graver et al, Stewart 1, swc 29-32-10e. Edward G. Borge, McKnown 1, sw ne se 31-32-10e. Page Oil Co., Barrington 1, owdd, cwl sw sw 34-32-10e.

CLAY COUNTY — Roth & Faurot et al, Bradburg 1, se nw 21-9-4e.

ELK COUNTY — Gilliland Oil Co., Ferguson 1, sw ne nw 3-31-8e. Davis, Hazlett et al, Webb 1, ne nw se 9-31-10e. Sherman et al, Armstrong 1, nw sw nw 10-31-10e. Sooner Gas Co., Webb 3, ne sw sw sw 10-31-10e. Denman Bros., Clough 1, c sw ne 25-31-10e. Blandell Drilling Co., Rettig 3, c ne ne 29-31-10e.

ELLIS COUNTY—Marland, Vine 1, sw se 27-11-19w.

GREENWOOD COUNTY—Berge & Bandeventer, Sanders 1, se ne ne 5-28-11e. Henderson & Holden, Reece 1, ne cor. 29-26-9e.

MARION COUNTY—General Utilities Co., Metcalf 1, se cor 10-16-7e.

OKLAHOMA

BECKMAN COUNTY—Day Oil Co., Ault 1, nwc 33-6n-21w.

CADDO COUNTY — Magnolia Pet. Co., Moss 3, nec nw sw 5-5n-9w.

CARTER COUNTY—M. T. Smith et al, Jones 1, sw nw se 26-1s-3w. Schermerhorn et al, Crockett 1, owdd, ne nw sw 23-1s-3w. Atlantic, Eason 1, owdd, ne se se 19-1s-3w.

COTTON COUNTY—Moore et al, Chambers 1, sec nw 2-2s-10w.

CREEK COUNTY—Skelly Oil Co., Fife 17, twin, sec ne se sw 15-14-6e. Bengal Oil & Gas Co., Tiger 5, sec sw sw 17-17-7e. Magnolia Pet. Co., Vance 31, swc se nw 7-18-7e. Shaffer Oil Ref. Co., Polk 1, nw ne se 1-14-9e. Olean Pet. Co., Farmer 1, nw se se 13-15-9e. Shaffer Oil Ref. Co. and Murta and Cole, Page 1-A, se sw nw 34-16-10e. Margay Oil Co., Page 1, sec ne se 34-16-10e. C. G. Tibbens, Jackson 5, cel ne sw 4-18-12e. Curtis Oil Co. et al, McHanon 1, se ne 9-18-9e.

GRADY COUNTY—Carter Oil Co., E. Polson 4, owdd, nw se sw 27-3n-5w. Commerce Dev. Co., Blunt 1, cne nw 4-3n-7w. Farley et al, McMahon 1, cne nw 24-4n-8w.

JEFFERSON COUNTY—Birdwell and Continental Dev. Co., Jennings 1, sw cor 20-7s-5w. Gypsy, Busby 3, sw se sw 17-7s-5w. Lesh & McCall, Peniston B-7, nw sw sw se 17-7s-5w; Pennsiton A-7, se ne sw se 17-7s-5w. McGinley and Sigler, Clark 5, sw nw se se 17-7s-5w. Beck and Lapham, Seay 2, nw sw se sw 34-6s-6w.

LOGAN COUNTY—J. E. Crosbie, Shaffer A-1, twin, nw cor 20-19-4w.

McINTOSH COUNTY—A. B. Wolfe et al, Beck 1, nw se 15-12-18e.

MUSKOGEE COUNTY — J. G. Graham, Scott 1, se sw 11-14-18e.

NOBLE COUNTY — White, Wilson et al, Plumb 1-A, sw se nw 10-24-1w.

OKFUSKEE COUNTY—Atlantic, Berryhill 1, se nw 35-11-9e.

OKMULGEE COUNTY — Nicholson Corp., Herrod 2, sw nw nw 14-11-13e. A. G. Hazltet, Tucker 7, nw se se 2-13-14e. F. E. Smith et al, Berryhill 1-A, sw se ne sw 17-14-13e. Papoose Oil Co., Brown 12, cel nw sw 21-15-14e. J. H. Rebold, Strip 4, twin, csl se sw 30-15-11e. Curtis Oil Co. et al, Messer 1, sw ne 3-15-12e.

OSAGE COUNTY—H. H. Mundy et al, No. 1, ne se 10-21-8e.

PAWNEE COUNTY—T. E. Mann et al, Sinnett 1, owdd, ne nw se 22-20-9e.

PITTSBURG COUNTY — Quinton Spelter Co., No. 1, sec 8-7n-18e.

PONTOTOC COUNTY — Westheimer & Daube, Wade 4, se sw ne 19-5-8e. Louisiana O. & R. Co., Perry 14, sw ne ne 19-5-8e.

POTTAWATOMIE COUNTY — Magnolia, Tull Fyke 1-D, sw ne nw 29-7-5e; Risenhoover 4-B, se ne 14-7-4e. McCulloch et al, Bruno 4, se ne 25-7-4e; Bruno 5, sw se ne 25-7-4e. Mid-Kansas O. & G. Co., Gesselman 2, nw sw nw 25-7-4e. Sinclair, Neeley 2, se nw sw 25-7-4e. The Texas Co. et al, Cherry 1, sw nw nw 25-7-4e.

SEMINOLE COUNTY—Sinclair and Kingwood Oil Co., Pompey 1, nw sw sw 24-7-6e. Roxana, Hotulke 3, se ne nw 23-7-6e. Carter, Cotche 3, nw sw ne 23-7-6e. Pure, Cotche 8, se ne ne 23-7-6e. Barnsdall, Cotche 2, sw nw ne 23-7-6e. Pure, Cotche 7, se nw ne 23-7-6e. Cotche 6, nw ne ne 23-7-6e. T. B. Slick, Williams 6, nw ne se 15-7-6e. Gypsy, Hulhoke 9, sw se se 14-7-6e. Carter, Tewee 6, nw ne 14-7-6e; Tewee 5, se nw ne 14-7-6e. Roxana, Johnson 2, ne sw nw 13-7-6e. Carter, Harjo 3, se sw 11-7-6e. Harris et al, Harris 1, se nw 30-9-8e.

STEPHENS COUNTY—Harry Hines, Beaver 1, nw se se 18-3s-6w. Wirt Franklin Pet. Corp., Ward Bell 1, se sw sw 13-1s-14w; Brittain 6, nw se 12-1s-4w.

TULSA COUNTY—West Pet. Co., Edwards 16, cel sw sw 1-18-12e.

WAGGONER COUNTY—A. K. Creighton, Cinda 2, se ne nw sw 22-17-17e.

LOUISIANA

ACADIA PARISH—Gulf Ref. Co. of La., Houston, G. Leckelt et al 2, 42-9s-2w, 1230 ft s and 300 ft w of ne c. The Texas Co., Shreveport, Latrielle B-5, 47-9s-2w, 440 ft westerly along n line from ne c of lot 2 and 50 fe s at a right angle in Sec. 47.

BOSSIER PARISH—Arkansas Nat. Gas Corp., Shreveport, J. H. Van Hoose B-3, 36-16n-12w, 2740 ft s and 800 ft w of ne c.

CADDO PARISH—Haynes Brothers, Shreveport, Lo. Live Stock & Patg. Co., 8-19n-16w, 200 ft w and 100 ft s of ne c se se.

CALCASIEU PARISH—Union Sulphur Co., Sulphur, Fee 731, 29-9s-10w, 1290 ft n and 2170 ft w of center; Fee 732, 29-9s-10w, 965 ft n and 2065 ft w of center. Vacuum Oil Co., Houston, Henshaw & Lemoine 1, 9-10s-9w, 300 ft e and 50 fe s of nw cor sw se; Lock-Moore 6, 34-9s-9w, 750 ft n and 50 ft e of sw c se. J. W. Watson, Baton Rouge, S. S. Hunter Est. 1, 19-9s-10w, 45 ft n and 45 ft w of se c.

EVANGELINE PARISH — Evangeline Co., Pine Prairie, Crowell-Spencer Lbr. Co., 26-3s-1w, 1100 ft n and 600 ft e of sw c. The Texas Co., Shreveport, Crowell-Spencer Lbr. Co. 1, 26-3s-1w, 1100 ft n and 650 ft e of sw c.

LA SALLE PARISH—M. H. King, Urania, M. H. King 1, 13-10n-1e, 200 ft n and 200 ft w of se c of ne.

MADISON PARISH—Mid-American O. & G. Co., Shreveport, G. Yerger 2, 51-16n-14e, 2720 ft e and 80 ft s of nw c.

MOREHOUSE PARISH—Woodley Pet. Co., Shreveport, Bonita Lbr. Co. 1, 3-22n-9e, 25 ft n and 660 ft e of sw c nw.

RICHLAND PARISH—Richland Prod. Co., Shreveport, Rhymes 1, 24-16n-5e, 1980 ft n and 660 ft w of se c.

ST LANDRY PARISH—A. E. Borsum, Houston, Brown 1, 15-6s-1e, 780 ft n and 50 ft w of se c.

ST. TAMMANY PARISH—West Pearl Oil Corp., New Orleans, Fritsche 1, 35-8s-14e, 250 ft s and 250 ft e of center.

CALIFORNIA

BELRIDGE—Union Oil Co., King 1, 30-28-21.

CAT CANYON—Winann Oil Co., No. 2, 30-9-32.

KERN COUNTY—Alfred L. Marsten, No. 1, 27-29-27.

LONG BEACH—Dabney-Johnston Oil Corp., No. 20, 24-4-13. Hancock Oil Co., Signal 14, 29-4-12; Signal 12, 19-4-12. Delaney Petroleum Corp., B-C 1, 24-4-13. Rred F. Fitch and Walter T. Ball, No. 1, 19-4-12. Shell Co., J-C 10, 29-4-12.

LOS ANGELES COUNTY—Pomona Oil Assn., Community 1, 32-1-8.

MIDWAY—Standard Oil Co., No. 82, 29-31-24; No. 91, 33-31-24.

MT. POSO—Petroleum Securities Co., Reuch 2, 22-27-28.

POTRERO—Associated Oil Co., Cypress 3, 34-2-14.

RICHFIELD—Rawco Oil Co., No. 1, 33-3-19.

ROUND MOUNTAIN—Fred M. Sayre, S-M 2, 10-28-28.

SANTA FE SPRINGS—Jameson Pet. Co., No. 10, 6-3-11. Wilshire Oil Co., W-C 1-A, 6-3-11; Cecelia 1-B, 6-3-11. Bell View Synd., No. 2, 6-3-11. The Texas Co., Steinly 4, 6-3-11; Steinly 5, 6-3-11. Wilshire Annex Oil Co., Koontz 2, 6-3-11; Koontz 3, 6-3-11; Koontz 4, 6-3-11. The Texas Co., Weaver 4, 6-3-11; Matern 3-10, 6-3-11.

VENTURA—M. K. & T. Oil Co., Foster 2, 28-3-23.

TEXAS

ARCHER COUNTY—C. B. Long et al, Wichita Falls, Feldhauser 1, A. Edwards sur, 750 ft from e and 150 ft from s line. A. W. Johnson, Graham, Garvey 1, 1859 TE&L sur, 150 ft from n and 476 ft from e line. Pandem Oil Corp., Wichita Falls, Hudson 11, B 80, J. W. Harris sur, 300 ft n of No. 10. Barnsdall Oil Co., Tulsa, Wilson 6A, B. Howard sur, 300 ft w of No. 5A. E. J. Stump & Co., & Hines, Wichita Falls, Perkins 7, B 14, D. C. S. L. sur, 750 ft from n and 150 ft from w line. F. C. Grebin, Wichita Falls, Alexander 2, B 22, L. M. Mead sur, 550 ft from e and 850 ft from s line. Petroleum Prod. Co., Wichita Falls, Edwards 1, B 27, L. B. Hunt sur, 150 ft from n and w lines. Bridewll & Heydrick Oil Co., Wichita Falls, Wilson 2, B 23, Amer Trib sur, 830 ft from w and 150 ft from s line. E. J. Stump & Co., Wichita Falls, Perkins 8, B 13, D. C.S.L. sur, 500 ft from w and 150 ft from n line. Maycamp Drilling Co., Wichita Falls,

Correcting a Mistaken Idea *About* SUCKER RODS

¶ Many oilmen are under the impression that if a Jones H. M. Sucker Rod is kinked, the kink will come out when the rod is put back in the well or if this fails it can be straightened out on the derrick floor. This is a fallacy.

¶ For despite the fact that every modern Jones H. M. Sucker Rod is 10,000 to 40,000 pounds per square inch stronger than ordinary steel rods, a break in the rod is inevitable if it is kinked.

¶ When a rod is kinked it is sprung beyond its elastic limit, the steel is strained and can only be relieved by heating the rod.

¶ Remember that no matter how strong or how good a sucker rod is made it is no longer safe for use in heavy pumping after being kinked even though it be carefully straightened.

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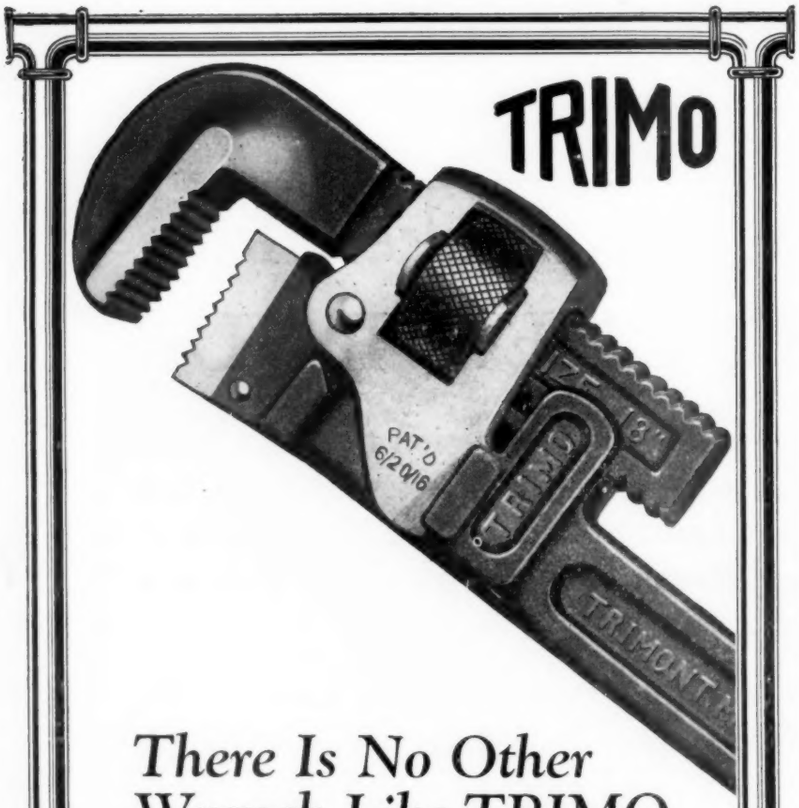
JONES SUCKER RODS



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The TRIMO Wrench continues to be the favorite in the oil fields because no other wrench has been able to equal its remarkable wearing qualities and exclusive features.

The time-saving nut guards keep TRIMO from being accidentally knocked out of adjustment. Replaceable jaws can be inserted whenever the old ones show signs of wear.

On sizes 14″, 18″, 24″, 36″ and 48″, reinforcing side lugs that overlap the steel frame give TRIMO extra strength for heavy work. The handle and jaws are drop forged.

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Prideaux 1, A. McMullen sur, 542 ft from n and 150 ft from w line. Magnolia Pet. Co., Dallas, Goldsmith 15, No. 9 BBB&C sur, 150 ft from n and e lines. E. R. Marts, Dallas, Prideaux 6, B B, A. McMullen sur, 150 ft from n and 400 ft from e line.

AUSTIN COUNTY—Gulf Prod. Co., Houston, Jackson 1, S. F. Austin sur, ne corner.

ATASCOSA COUNTY—Witherspoon Oil Co., San Antonio, Moore 3, J. Gilbert sur, (Caldwell County); Nichols 2, J. Gray sur, 600 ft s of No. 1.

ANDERSON COUNTY—Humble O. & R. Co., Houston, Hall 1, J. Albright sur, 808 ft from n and 600 ft from e line.

BROWN COUNTY—Anna Belle Oil Co., Cisco, Hickman 9, No. 783 T. Benson sur, 300 ft e of No. 8. Kone Prod. Co., Cisco, Hickman B13, No. 783 T. Benson sur, 300 ft e of No. 11. Cranfill & Reynolds, Cisco, Kellar B1, No. 141 R. Mitchell sur, 160 ft from n and 1325 ft from e line. Young Bros. & Alexander, Inc., Ft. Worth, Teston 9, No. 151 P. Curlong sur, 300 ft w of No. 8. W. J. Redmond, Brownwood, Connaway 1, No. 292 C. N. Bassett sur, 600 ft from n and 300 ft from w line. Phillips Pet. Corp., Bartlesville, Okla., Dabney 1, C. E. Brooks sur, 810 ft from n and 92 ft from e line. Usona Prod. Co., Brownwood, Marr 1, R. S. Gillespie sur. L. G. Bradstreet Co., Ft. Worth, Wooldridge 1, E. W. Kinnebrew sur, 450 ft from e and 150 ft from s line. Milham Corp., San Antonio, Rosser 4, No. 117 W. Q. Cross sur, 150 ft from s and e lines. Robins & Olney, Ft. Worth, Nash 1, CEP&M sur, 2240 ft from sw and 506 ft from se line. Charter Oil Co., Brownwood, Byler 3, No. 43 T&NO sur, 150 ft from n and 170 ft from e line. Anna Belle Oil Co., Cisco, Hickman 8, T. Benson sur, 300 ft e of No. 5. H. J. Uhl, Brownwood, Churchill 1, s 141, M. Curbier sur, 750 ft from nw and 150 ft from s line. Cranfill & Reynolds, Cisco, Eubanks 11, No. 141, R. Mitchell sur, 600 ft w of No. 2. Midland Oil Co., Fort Worth, Hickman Explo. Co., Amarillo, George 2, No. 117, M. Q. Cross sur, 150 ft from e and 465 ft from s line. H. P. Evans, Brownwood, Martin B1, s 11, HT&B sur, 1450 ft from w and 1350 ft from s line. Seibold & Sheldon, Jr., Brownwood, Hamilton 7, No. 791, W. English sur, west central.

BASTROP COUNTY—Gulf Prod. Co., Houston, Condron 2, C. A. West sur, se corner.

BRAZORIA COUNTY—Sinclair O. & G. Co., Houston., Norton 4, P. D. McNeel sur, 400 ft n of No. 3.

CALLAHAN COUNTY—Prairie O. & G. Co., Ranger, Wilson 1, No. 798, G. M. Vigal sur, 143 ft from n and 150 ft from w line. Gillett 2, G. M. Vibal sur, 150 f tfrom w and 800 it from s line. Klutts 1, G. M. Vigal sur, 150 ft from s and w lines. Mortimer, Hobbs & Ferguson, Cisco, Jones 1, s 40, D. & D. Asy. sur, 600 ft from w and 1150 ft from n line. J. R. Haynes, San Antonio, Wagley 1, 2969, TE&L sur, 150 ft from s and e lines. Turley Oil Corp., Dallas, Parks 6, 3194, TE&L sur, e of No. 5; 7, same sur, e of No. 6.

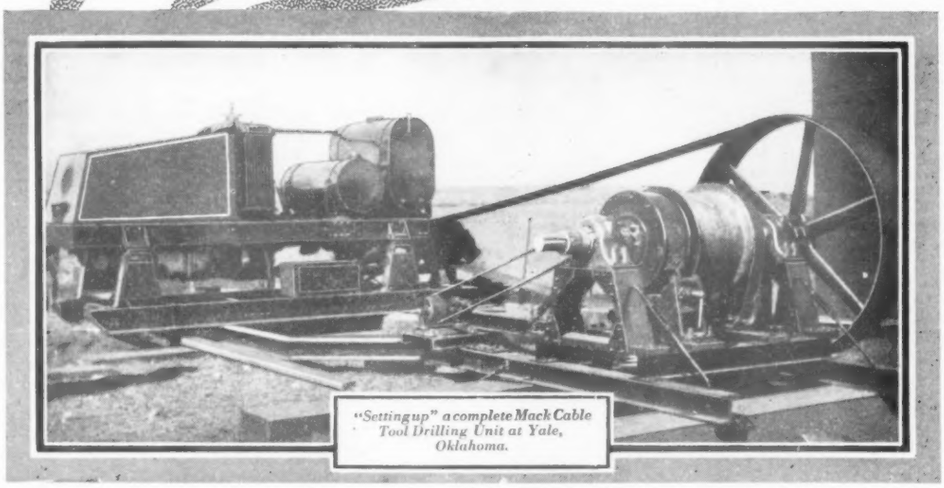
COLEMAN COUNTY—P. K. French, Fort Worth, England 1, No. 667, J. H. Goodwin, 2000 ft from e and 750 ft from s line. L. G. Bradstreet, Fort Worth, Wheatley 1, No. 80, L. C. Manson sur, 660 ft from s and e lines. Amerada Pet. Corp., Cisco, Holt 1, No. 630, M. A. Fisk sur, 1783 ft from n and 300 ft from w line. Atlantic and Continental Oil Co., Wichita Falls, Overall 1, No. 70, J. H. Barclay sur, 500 ft from w and 481 ft from s line. Fuller 1, M. Martinez sur, 815 ft from n and 150 ft from s line. Amerada Pet. Corp., Cisco. Harris 151, No. 162, J. Saunders sur, 1214 ft from w and 2199 ft from s line, S. J. Taylor, Fort Worth, Gay 1, b 90, C. T. Pendleton sur, 150 ft from n and e lines. Whiteside, Mitchell & Groves, Coleman, Stafford 2, s 275, B. Alderada sur, ne corner. Ilsong Prod. Co., Fort Worth, Eddington 1, s 187, V. C. S. L. sur, 200 ft from e and 150 ft from s line.

CALDWELL COUNTY — Cranfill & Reynolds, Cisco, Starke 2, Crenshaw sur, 150 ft from e and 525 ft from s line; 3, same sur, 218 ft from e and 150 ft from s line. Carl Bros. & Suttle, San Antonio, Malons 1, A. Floyd sur, nw corner. Texas Co., Houston, Moore 3, J. Gilbert sur, 450 ft from ne and 150 ft from se line. Roxana Pet. Corp., Dallas, Jolly 3, C. Crenshaw sur, 150 ft from n and

REG U. S. PAT. OFF.

Mack

MODEL AP
150 HORSEPOWER ENGINE AND DRILLING CLUTCH



"Setting up" a complete Mack Cable Tool Drilling Unit at Yale, Oklahoma.

for Cable Tool Drilling

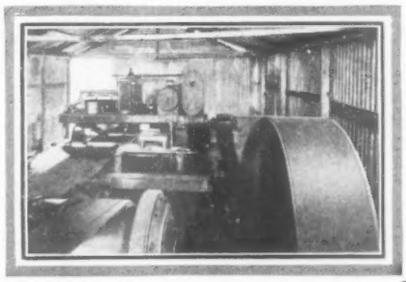
A 28 Year Background

From the very start of motor transportation, Mack-built trucks have been used for carrying heavy materials in the oil fields.

Therefore, knowing full well what is demanded of a modern piece of machinery that enters any phase of oil-field work, the Mack-International Motor Truck Corporation is now offering a Cable Tool Drilling Unit as capable and efficient as quality materials, workmanship, plant equipment, engineering skill and experience can make it.

The Complete Unit

The Mack Model AP Engine and Drilling Clutch unit has



A look into an engine room, showing the Mack Cable Tool Drilling Unit in operation at Marathon, Texas. The entire outfit can be transported at one time upon a tractor and trailer.

a range of *power* and *performance* heretofore unobtainable. The gasoline engine, developing 150 H.P., has light pistons and rods and a counterbalanced crank-shaft of unusual diameter.

The use of a four-speed transmission or gear box affords three reductions below direct drive with which to multiply the power for pulling casing, etc. The lowest reduction multiplies 5.20 times.

Recent Installations

Mack Cable Tool Drilling Units may now be seen in operation at many different points, throughout the oil-fields. Recent installations have been made at Alpine, Texas; Fort Stockton, Texas; Yale, Oklahoma; Carter, Wyoming; Marathon, Texas; Kevin, Montana; and other points. The entire power plant is serviced by more than 100 direct Mack Factory Branches strategically located throughout the country.

For further details write direct to

MACK-INTERNATIONAL MOTOR TRUCK CORPORATION

DENVER, COL. BILLINGS, MONT. BUTTE, MONT. OKLAHOMA CITY, OKLA.
TULSA, OKLA. DALLAS, TEXAS FORT WORTH, TEXAS CASPER, WYO.

e lines; 4, same sur, 750 ft from n and 150 ft from w line.

COOKE COUNTY—American Ref. Co., Wichita Falls, Dennis 16, T. J. Moss sur, 150 ft from n and e lines. E. W. Ferguson, Gainesville, English 1, E. Farris sur, 450 ft from e and 150 ft from s line.

CARSON COUNTY—L. L. Travis, Amarillo, Harrell 1, s 162, b 7, I&GN sur, 2793 ft from n and 1698 ft from e line. A. R. Anderson, Amarillo, Truney 1, s 50, b 7, I&GN sur, center.

CHAMBERS COUNTY — Mills Bennett Prod. Co., Houston, Smith 1, H. Griffith sur, 180 ft from w and 50 ft from n line.

CHEROKEE COUNTY—Humble Oil & Ref. Co., Houston, Weiseberg 1, T. L. Trimble sur, 780 ft from n and 350 ft from e line.

CROCKETT COUNTY—Fuhrman Pet. Corp., Dallas, Padgett 1, s 17, S. C. White sur, 330 ft from nw and 2336 ft from ne line.

EASTLAND COUNTY—Creighton & Shadbolt etal, Cisco, Harrison 1, s 52, b 4, H&TC sur, 300 ft from w and 150 ft from s line. Chestnut & Smith Corp., Breckenridge, Rankin 1, s 38, b 2, H&TC sur, 150 ft from w and 672 ft from s line. Texas Pacific Coal & Oil Co., Ranger, Brewer 19, E. Finley sur, 950 ft from e and 400 ft from n line. Lamanche 1, s 29, b 1, H&TC sur, 1170 ft n and 1470 ft from w line, Connellee 11, s 20, N. Usurry sur, 1190 ft from e and 175 ft from s line. Schimmel Prod. Corp., Fort Worth, Brewer 1, E. Finley sur, 1100 ft from n and 160 ft from w line. Chestnut & Smith Corp. et al, Breckenridge, Brashear 2, W. Van Norman sur, 330 ft from s and 160 ft from w line. Harrell 1, J. B. Conway sur, 660 ft from n and 990 ft from w line. Geo. W. Price, Eastland, Schmick 1, s 1, b 4, H&TC sur, 1200 ft from w and 1000 ft from s line.

FORT BEND COUNTY—Texas Co., Houston, Bushnell 1, S. Miller sur, 150 ft from s and w lines. Moody Corp., Houston, West 2, T. Robermaker sur, 575 ft n and 75 ft from e line.

FOARD COUNTY—Panhandle Ref. Co., Wichita Falls, Long 1, J. M. Seaton sur, 1500 ft from e and 1235 ft from s line.

GRAY COUNTY—Texas Co., Wichita Falls, Saunders 6, s4, b 1, ACH&B sur, 990 ft from s and 650 ft from e line. Langham 2, s1, b B2, H&GN sur, 990 ft from n and 330 ft from e line. Williams 3, s 6, b 1, TC&HB sur, 257 ft from n and 225 ft from w line. Morlyan Oil Oil Co., Amarillo, Davis 1, s 8, b 1, ACH&B sur, 330 ft from s and e lines. Alco Royalty Corp., Tulsa, Okla., Wright 1, s 12, b 3, I&GN sur, 330 ft from s and e lines.

GUADALUPE COUNTY — Magnolia Pet. Co., Dallas, McKean 1, H. Cottle sur, 150 ft from n and w lines.

HARRIS COUNTY—A. L. Fondren, Houston, Mason 9, 200 ft n of No. 8. T. W. Horn, Houston, Fee 30, J. B. Jones sur, 530 ft from w and 40 ft from s line. J. A. Shine et al, Houston, Kutzman 2, s 1, HT&B sur, 160 ft from n and 1600 ft from e line.

HOWARD COUNTY—Sun Oil Co., Dallas, Settles 3, s 135, b 29, W&NW sur, 330 ft from n and e lines. Dunigan Bros. & Hyer, Fort Worth, Clay 1, s 126, b 29, W&NW sur, 250 ft from s and w lines.

JONES COUNTY—W. W. Hines, Abilene, Saunders 1, s 1, b 15, T&P sur, 150 ft from n and 450 ft from w line. E. P. Campbell & Co., Inc., Abilene, J. H. Berry 1, s 15, b 2, S. P. Ry sur, 660 ft from n and w lines. Marland Oil Co., Fort Worth, Mason 4, s 18, b 19, T&P sur, 330 ft from w and 962 ft from s line. Pandem Oil Corp., Wichita Falls, S. R. Cox A, 1, s 43, b 14, T&P sur, 150 ft from n and e lines.

JACK COUNTY—J. B. Chandler, Jacksboro, Dubose 4, J. B. Williams sur, 150 ft from n and w lines; 5; same sur, 316 ft s of No. 4; 6, same sur, 150 ft from s and w lines; 7, same sur, 150 ft s of center of n line; 8, same sur-150 ft from n and e lines.

JEFFERSON COUNTY—Yount-Lee Oil Co., Beaumont, McFaddin 79, P. Humphreys sur, 255 ft from w and 590 ft from n line. Gladys 67, b 56, J. A. Veatch sur, 120 ft from s and 10 ft from e line.

JIM WELLS COUNTY—Cushing O. & G. Co. of Texas, San Antonio, M. Perez 2, La Tinajara sur, ne corner.

LIBERTY COUNTY—Yount-Lee Oil Co., Beaumont, Mitchell 8, M. G. White sur, 500 ft from s and 200 ft from w line. Houston Prod. Co., Houston, Day-Carter 1, J. Devore sur, 50 ft from n and e lines.

LIMESTONE COUNTY—Hicks & Dearing, Fort Worth, Stroud 1, P. Varela sur, 167 ft from ne and 200 ft from se line.

LAVACA COUNTY—Texas Co., Houston, Borcher 3, J. Chesear sur, 150 ft from n and w lines.

LEON COUNTY—Ballard Oil Corp., Centerville, Tuft 1, R. Garza sur, 397 ft from n and 338 ft from e line.

MONTAGUE COUNTY—Bridwell Oil Co., Wichita Falls, Salmon D, 3, W. P. Zuber sur, 300 ft e of No. 2.

McCULLOCH COUNTY—McLean & Jamison, Ballinger, Anderson 1, H. Huperz sur, 2400 ft from w and 725 ft from s line.

MILAM COUNTY—Groneman Bros., Rockdale, Holliman 1, W. W. Hill sur, 150 ft e of center of w line.

MEDINA COUNTY—W. R. Painter, San Antonio, Muennick 1, b 367, H. Castro sur, 1272 ft from e and 1350 ft from s line.

PECOS COUNTY—Mid-Kansas O. & G. Co., Tulsa, Okla., Yates D, 5, s 62, b 1, I&GN sur, 6648 ft from w and 811 ft from s line; Yates F, 3, s 63, b 1, I&GN sur, 3460 ft from w and 830 ft from s line.

PANOLA COUNTY — Magnolia Pet. Co., Dallas, Adamss 1, J. M. Birdsong sur, nw cor.

PALO PINTO COUNTY—Gohlson & Gordon, Ranger, Watson 1, s 39, T&P sur, 1054 ft from n and 565 ft from e line.

REFUGIO COUNTY — Houston Oil Co., Heard 1, Refugio sur, 967 ft from w and 150 ft ft from s line. Houston Gulf Gas Co., Houston, O'Brien 3, I. O'Brien sur, 2250 ft from w and 200 ft from s line.

SHACKLEFORD COUNTY — Cross Cut Corp., Fort Worth, Brown 1, s 67, L. A. L. sur, 150 ft from s and e lines. Roeser & Pendleton, Inc., Fort Worth, Cook C27, s 60, E. T. Ry sur, 628 ft from n and 565 ft from e lin ; Cook A9, s 61, E. T. Ry sur, 220 ft from s and 1294 ft from w line. Hope O. & G. Co., Fort Worth, Davis 41, s 13, b 12, T&P sur, center. Home O. & G. Co., Albany, Leschber 8, 545 TE&L sur, 450 ft from ne and 1698 ft from se line.

SHELBY COUNTY—Gulf Prod. Co., Houston, Pickering 1, G. H. Patterson sur, 1595 ft from w and 912 ft from s line.

SMITH COUNTY—Gulf Prod Co., Houston, McCammond 3, V. Moore sur, 700 ft w of No. 2.

SCHLEICHER COUNTY—Long Bros., San Angelo, Williams 1, s 28, HE&WT sur, 300 ft from n and 1540 ft from e line.

WICHITA COUNTY—C. A. Everts, Houston, Burnett 1, s 1, b 1, H&TC sur, 150 ft from s and e lines. C. W. Clark, Wichita Falls, Blair & Kemp 2, b 26, M. Roberts sur, 200 ft from n and 1206 ft from e line. L. A. Wilkins, Burkburnett, Morgan 1, E. Stanley sur, 150 ft from n and w lines. Hammond & Garrett, Wichita Falls, McCarty D, 4, W. R. Eaves sur, 300 ft se of No. 3; 3, same sur, 150 ft from n and w lines. McCarty A, 14, S. O. Fowler sur, 300 ft ne of No. 13 Priddy 1, J. M. Sharp sur, 150 ft from n and w lines. W. A. Patterson, Fort Worth, Douglas 2, s 2, Douglas sur, 300 ft s of No. 1. Texas Co., Wichita Falls, Waggoner Bros. 5,H. George sur, 300 ft e of No. 4. Burt Williams, Wichita Falls, Thom 11, HT&B sur, 340 ft sw of No. 1. W. B. Omohondro, Wichita Falls, Pace 46, 15 R. J. Scott sur, 300 ft e of No. 12.

WILBARGER COUNTY—Fain-McGaha Oil Corp., Wichita Falls, Waggoner U1, s 23, b 4, H&TC sur, 150 ft from s and w lines. Hampton & Wilson, Wichita Falls, Waggoner 1, s 40, T. D. Purnell sur, 150 ft from s and e lines. G. B. Ancell, Electra, Ancell B1, s 2, b 7, H&TC sur, 150 ft from n and 450 ft from e line. Consolidated Oil Co., Wichita Falls, Waggoner A, 10, s 5, b 5, H&TC sur, 150 ft from n and 830 ft from e line. Martin & Hamilton, Wichita Falls, Waggoner 4A, s 5, b 5, H&TC sur, 420 ft n of No. 2.

WINKLER COUNTY—Dixie & Southern Crude Oil Purchasing Co., Shreveport, La., I. Hendrick M 24, s 33, s 26, 2200 ft from n and 330 ft from e line. Atlantic Oil Prod. Co., Dallas, I. Hendrick F2, s 40, b 26, 1650 ft from e and 1320 ft from s line. Independent O. & G. Co., Fort Worth, Vardeman 7B, s 41, b B5, 430 ft from n and 380 ft from e line. Dixie & Southern Crude Oil Purchasing Co., Shreveport, La., I. Hendrick I1, s 30, b5, 2310 ft from n and 990 ft from e line. I. Hendrick S1, s 34, b 26, 2200 ft from n and 330 ft from w line. I. Hendrick H6, s 28, b B5, 1650 ft from w and 1155 ft from s line; H5, s 28 b B5, 660 ft e of No. 4; H3, s 28, b B5, 330 ft from w and 1700 ft from s line.

WEBB COUNTY—Houston Oil Co., Houston, Benavedes D9, s 753, b 12, 265 ft n of No. D7; D10, s 753, b 12, 160 ft e of center of w line. Benavides E2, s 753, b 11, 160 ft from e and 662 ft from s line. Sun Oil Co., Dallas, Yeager 1B, No. 5, Las Animas sur, 1048 ft from e and 150 ft from n line. Morgan San Antonio, Bruin 1, b 40, Albercas sur, center.

WILLIAMSON COUNTY—S. M. Messer, Davilla, Swenson 1, Burkett-Burns sur, 150 ft from s and e lines.

WHEELER COUNTY—Carbon O. & R. Co., Shamrock, Nelson 1, s 5, b 24, HG&N sur, 330 ft from s and w lines. L. W. Rook, Shamrock, Smock 2, sec s, b 24, HG&N sur, 330 ft from w and 660 ft from s line. J. J. Rook, Shamrock, McDowell 1, s 2, b L, J. W. Linzy sur, 330 ft from n and e lines.

WHARTON COUNTY—Geo. Hyde, Houston, Woytek, 12 S. F. Austin sur, 50 ft from ne and 100 ft from se line.

YOUNG COUNTY—C. A. Pennell, Loving, Johnson 1, E. W. Sargent sur, 150 ft from s and w lines. Wichita Prod. Co., Wichita Falls, Hamilton 5, 1809 TE&L sur, 150 ft from e and 1791 ft from s line. W. E. Allaum, Fort Worth, Sims 1, 610 TE&L sur, 150 ft from n and w lines. Harry Hines, Wichita Falls, Kunkel 1, 2447, TE&L sur, 150 ft from s and w lines. Schermerhorn Oil Co. and Dyer, Tulsa, Okla., Thompson 2, 2692, TE&L sur, 200 ft from sw and 150 ft from se line.

ZAPATA COUNTY—R. V. Hill, San Antonio, Ramirez 2, No. 627, T. Burtrang sur, 425 ft from nw and 600 ft from ne e. Vela & Wolcott, Laredo, Vela 1, Porcion No. 29, b 24, 54, vs. se of nw line.

Earlsboro Extended

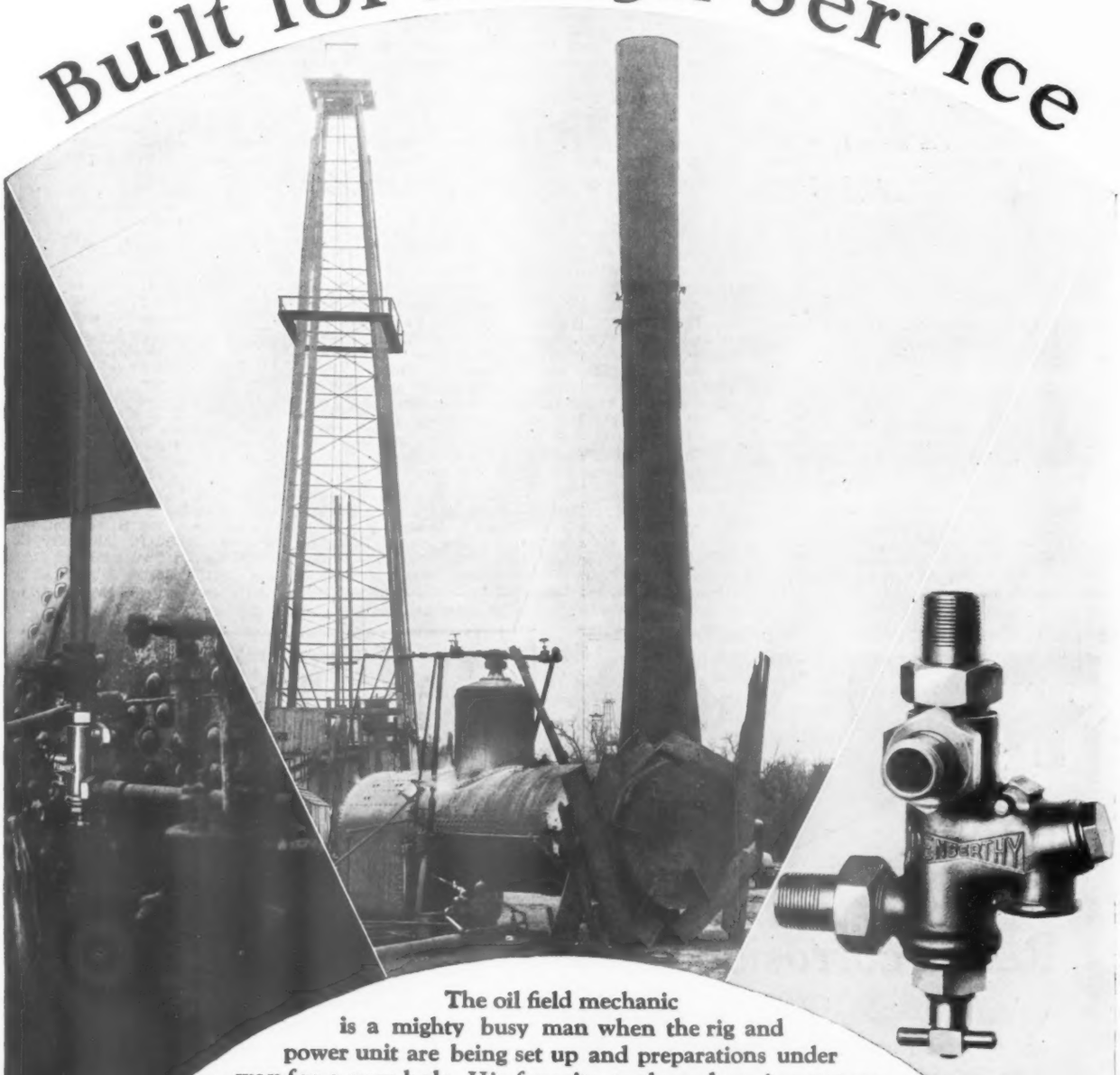
Tulsa.—Development of semi-wildcat acreage outside of recent discoveries made on the northeast edge of Earlsboro field of Greater Seminole has resulted in two extensions within the past week, one northwest of Superior Oil Company's 4000-barrel Walker well in Section 1-9-5 and one northeast of Skelly Oil Company-Atlantic Oil Producing Company's Cherry well in Section 6-9-6, a 4500-barrel well.

Burke-Greis et al's Wisener 1, in the southwest corner of the northeast quarter of Section 6-9-6, flowed 250 barrels in seven hours August 9 from Wilcox sand at 4353-63 feet, extending the producing area widened by Skelly and Atlantic an additional half mile east and two locations north. Tidal Oil Company's Walker 1, in the southeast corner of Section 35-10-5, swabbed 660 barrels in four hours August 9 and was then shut down, probably for the purpose of deepening. It had Wilcox sand at 4328-37 feet, and extends Earlsboro's production limits on the north nearly a mile.

Burbank Extension

Tulsa.—Lewis Gas Products Company, one of the most aggressive buyers at the past two sales of Osage County land sales, completed its No. 1, in the northwest corner of Section 23-26n-6e, Burbank extension, August 9 for 125 barrels from sand at 2962-90 feet after shooting with 60 quarts. Total depth is 2999 feet.

PENBERTHY INJECTORS
are
Built for Rough Service



The oil field mechanic is a mighty busy man when the rig and power unit are being set up and preparations under way for a new hole. His favorite tools and equipment are those which "stand up" under the rough and ready methods of the Oil Country. Equipment must also be easily handled and quickly installed.

The reputation that the Penberthy Automatic Injector has for meeting these requirements has made it the favorite means of feeding the oil field boiler.

There is a size and type of Penberthy Injector for your boiler conditions. Penberthy Products are carried in stock by leading supply houses.

PENBERTHY INJECTOR COMPANY

ESTABLISHED IN 1886

DETROIT

CANADIAN PLANT WINDSOR, ONT.

Say you saw it in The OIL WEEKLY

WILDCATS FROM ALL SECTIONS

WEST TEXAS

Company, well and Location	Initial Production Bbls.	Depth
Completions		
CROCKETT COUNTY—		
W. R. Simmons & Marland, University 1	*	1140
GLASSCOCK COUNTY—		
Landreth Prod. Corp., Houston 2..	*	3770
TOM GREEN COUNTY—		
Cox & Hooper Garlity 1	*	345
PECOS COUNTY—		
Cowboy Evans-Read et al, Byrens 1	*	1340
RUNNELS COUNTY—		
Vacuum Oil Co. et al, Flannagan 1	*	2720
Henry B. May et al, Schneider 1...	*	2509

Drilling Report

ANDREWS COUNTY—Deep Rock Oil Co.'s Harris 1, elev 3173 ft, top salt 1705 ft, top lime 4005 ft, showing oil and gas, dr 4331 ft.

BORDEN COUNTY—E. L. Doheny et al's Koonsman 1, dr 600 ft.

BREWSTER COUNTY — Cowden-Cole et al's Jackson-Harmon 1-A, dr 1155 ft. Forest Oil Corp.'s Skinner 1, sd 1150 ft. Van McPhail et al's McIntyre 1, sd 1765 ft. Reese & White's Kimball 1, sd 1825 ft. Clayton Williams et al's Poncey 1, lcn.

COKE COUNTY—Lipan Oil Co.'s Rawlings 1, sd 2840 ft.

CONCHO COUNTY — Douglas Oil Co. et al's Harral 1, fsh 3140 ft. Exploration Co.'s Hartgrove 2, machine.

CRANE COUNTY—Church & Fields' University 3, dr 710 ft. C. C. Duffey et al's Cowden 1, top salt 750 ft, dr 1650 ft. Gulf Prod. Co.'s Waddell 5, rig. Evans-Anderson et al's State Bank Fee 1, elev 2463 ft, top salt 525 ft, making sulphur water, dr 3085 ft.

CROCKETT COUNTY—T. W. Callahan et al's J. S. Todd 1, rig. Hal Compton & Co.'s University 1, elev 2681 ft, top salt 1055 ft, top lime 2055 ft, sd with show oil 2058-62 f.t W. W. Donnelly et al's Massie 1-A, dr 780 ft; Shannon-Middlebuster 2, (Sec. 18) top salt 774 ft, set cas 1175 ft; Shannon-Powell 1, (Sec. 42) spudded and sd. Fuhrman Pet. Corp.'s Padgett 1, spudding. Renee Oil Co.'s Powell 1, elev 2692 ft, top salt 1100 ft, top lime 2070 ft, sd for second shot, td 2706 ft.

CULBERSON COUNTY — Deep Rock Oil Co. & Grisham-Hunter Corp.'s Bettis 1, elev 3724 ft, trying to pump with oih at 1483-95 ft. J. M. Hickey et al's C. O. Finley 1, dr 1400 ft. Scott & Dittman's Miller 1, sd 1765 ft.

JEFF DAVIS COUNTY—Sam F. Means et al's J. Z. Means 1, dr 3125 ft.

EDWARDS COUNTY—Magnolia Pet. Co.'s Whitehead 2, dr 985 ft. McMan O. & G. Co.'s Schreiner 1, dr 1165 ft.

EL PASO COUNTY—C. E. Sillix et al's Malone 1, sd 1010 ft.

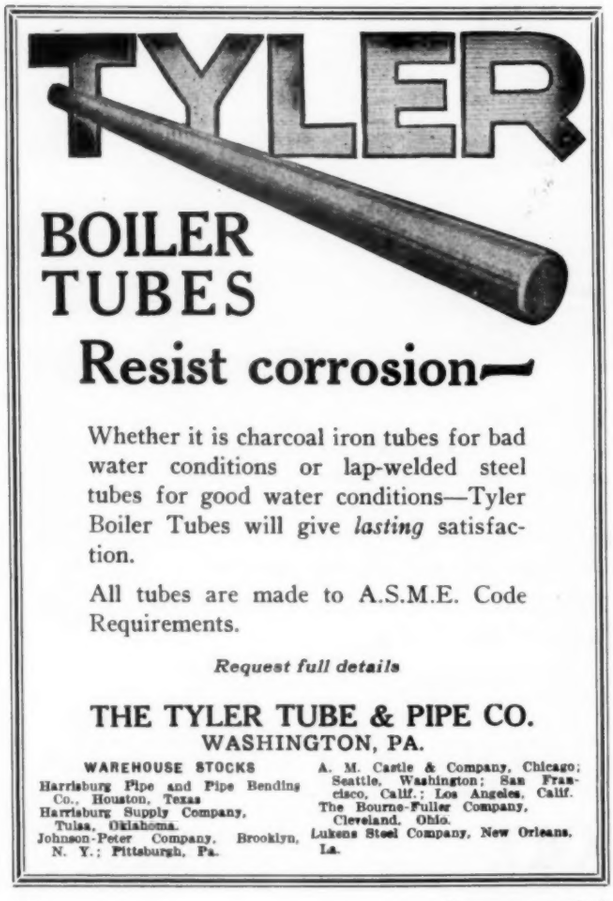
FISHER COUNTY — Cranfill-Reynolds & Sun Oil Co.'s E. G. Young 1, lcn; J. A. Young 2, lcn; B. F. Willingham 1, lcn. Mid-West Exploration Co.'s Decker 1 and 2, lcns. R. W. Rainey & Bill Little's Marberry 2, elev 1929 ft, top lime 2995 ft, sd showing oil and gas 3289 ft. Roeser-Pendleton & Landreth's Decker 1, set cas 1325 ft. Texas Unity Oil Co.'s Reddus 1, dr 2695 ft.

GARZA COUNTY—Emerald Oil Co.'s Boren 3, elev 2353 ft, top salt 660 ft, top lime 1605 ft, dr 4735 ft.

GLASSCOCK COUNTY—Eastland Oil Co. & White Eagle O. & R. Co.'s Cox 1, dr 845 ft. Meriwether Oil Co.'s McDowell 2, elev 2522 ft, top salt 1000 ft, top lime 2510 ft, dr 3720 ft. Roxana Pet. Corp.'s Boston 1, elev 2713 ft, top salt 1205 ft, top lime 2760 ft, dr 3600 ft. World Oil Co.'s McDowell 1-B, elev 2521 ft, top salt 975 ft, co 2030 ft.

TOM GREEN COUNTY—F. P. Green et al's Fee 1, sd 1065 ft. Tinker et al's Jones 1, sd 940 ft. McLaughlin & Ridge's Holder 1, hfw and dr 3000 ft.

HOWARD COUNTY—Amerada Pet. Corp. & Rycade Oil Corp.'s Roberts 1, elev 2738 ft, top lime 2115 ft, flowed 230 bbls oil six hours at 2490-2505 ft; Stewart 1, elev 2779 ft, top 2240 ft, cem 6-inch cas 3091 ft. Bristow & Merrick's Hooks 8, spudded and sd. J. S. Cosden & Co.'s Roberts 1-A, elev 2777 ft, completed swab 340 bbls oil three hours 3083-3105 ft, td 3107 ft; Roberts 2-A, elev 2792 ft, showing oil 3118-24 ft, cas froze; Roberts 3-A, elev 2754 ft, dr 2925 ft; Roberts 4-A, spudded and sd. W. W. Donnelly et al's Clay 1, elev 2674 ft, sd for shot with 700 ft oih at 1900-45 ft. Dunagan & Fred Hyer's Clay 1, dr 1190 ft. Evans Oil Co.'s Roberts 1, cem cas 1645 ft. F. H. E. Oil Co. & Moody Corp.'s Roberts 3-B and 4-B, lcns; Roberts 1-C, cem cas with oih 3043-45 ft; Roberts 3-E, dr 1370 ft; Roberts 4-E, dr 280 ft; Roberts 5-E and 7-E, lcns; Roberts 8-E, run tubing with hfo at 1301-20 ft. Godley O. & G. Co.'s Hooks 6, sd 1729 ft; Hooks 7, 1330 ft. Gulf Prod. Co.'s Clay 2, fsh after shot 60 qts. in pay 1872-91 ft, swabbed 45 bbls oil, td 1897 ft; Chalk 5, cem 6-inch cas 1597 ft. Greene O. & R. Co.'s Clay 2, stdz 1490 ft. L. C. Harrison et al's Dodge 1, rig. Laurel O. & G. Co.'s Reid 1, elev 2375 ft, top salt 965 ft, dr 3365 ft. Laurel & Cosden & Co.'s Roberts 5, dr by tools 2585 ft; Roberts 6, dr 2960 ft; Roberts 7, dr 250 ft. McGinley-Sigler Co.-Henshaw-Davis's Eason-Settles 1, elev 2708 ft, top lime 1950 ft, completed flow 60 bbls per hour 2208-10 ft. McGinley Corp. & Henshaw Oil Corp.'s Settles 1-B, sd 2692 ft. Magnolia Pet. Co.'s O'Daniel 2, show oil 2645 ft, dr 2665 ft; Roberts 4, elev 2704 ft, dr with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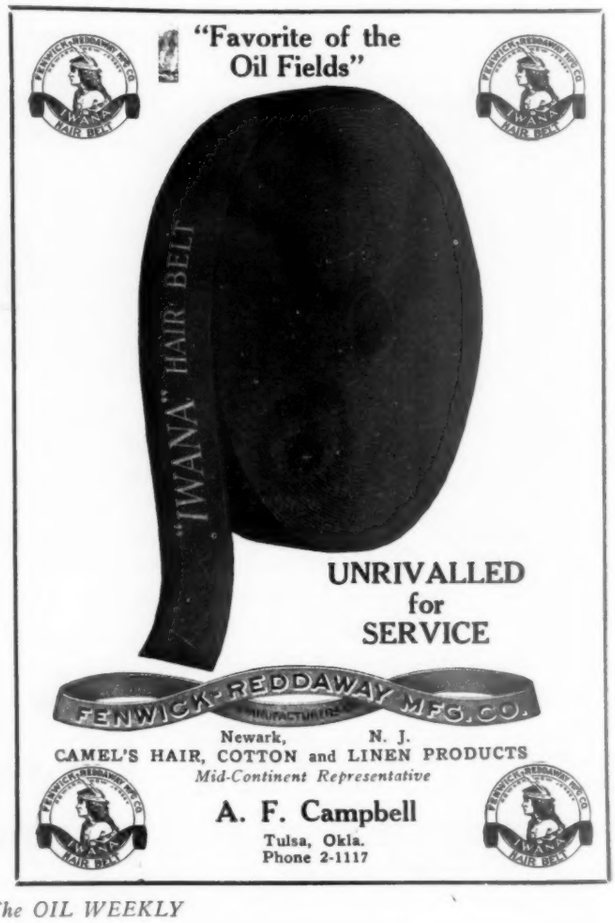

WHY
TIMKENS SWEEP ON

THE WAY in which Timken Bearings have swept into dominance in so many types of industrial equipment has become the talk of all Industry. So radically and so rapidly have previous ideas of bearing performance been revolutionized by Timken Tapered Roller Bearings that the mechanical reasons which made this performance possible are sometimes lost sight of:

RADIAL LOADS AND THRUST LOADS Because of their tapered construction, Timken Bearings carry without compromise radial loads, thrust loads, or both loads in any combination, making possible more simple, compact, effective, wear-proof, and rigid mountings.

GREATER LOAD AREA Timkens are line contact bearings. Size for size, they have a greater capacity because the loads are distributed on the entire length of the rolls, cup and cone, instead of being concentrated on a very small area.

POSITIVELY ALIGNED ROLLS The design of the Timken Bearing provides for full contact along the entire length of the roll, cone and cup. The rolls are positively aligned to the axis of the cone and cup, thus allowing the bearing to function continuously at its full extra capacity.

WEAR-PROOF The longer life of Timken Bearings and their greater resistance to wear is made possible because the loads are distributed over the entire length of the rolls, cone and cup; because of the fact that radial, thrust and combination loads are provided for; because of the special analysis electric furnace Timken steel; because the parts are case hardened to give them a glass-hard outer surface with a tough elastic inner core; and because each part is made to extremely accurate dimensions. Even after hundreds of millions of revolutions, wear in a Timken Bearing is so slight as to be practically imperceptible even when measured by delicate instruments.

A PRECISION PRODUCT So accurately and precisely made is the Timken Bearing that it has become the universal standard on machine tool spindles, where a few years ago such accuracy was thought beyond attainment.

FRICTIONLESS The Timken Bearing is practically 100% frictionless: The higher load capacity and greater wear resistance of tapered line contact are thus obtained at an insignificant power loss almost impossible to calculate.

TAKE-UP IN ASSEMBLY The take-up feature in the Timken Bearing is a great advantage in assembly. Manufacturers find this to be of tremendous benefit, as it allows for minor machine irregularities, the locating of gears, etc. Last but not least, since slight wear is inevitable in any machine that revolves—(regardless of any statements to the contrary)—the Timken Bearing is designed for this take-up without affecting the proper operation of the bearing.

Revolutionizing operating and maintenance costs and stepping up production, they have brought a new day of manufacturing economies. Machine performance, never before thought possible, is now an accomplished fact. Timken dominance was inevitable. Timkens are sweeping on—wherever wheels and shafts turn.

TIMKEN *Tapered Roller* **BEARINGS**

Say you saw it in The OIL WEEKLY

hfo 2930 ft; Roberts 8, elev 2729 ft, top lime 2045 ft. dr 2720 ft; Roberts 9, sd 1100 ft; Roberts 10 and 11, rigs; Roberts 12, lcn; Roberts 13, machine. Marland Prod. Co.'s Clay 1-F, dr 1710 ft; Roberts 1, lcn. Merrick & Lamb's Clay 4, swab 45 bbls oil four hours after shot, td 1870 ft; Clay 5, lcn. Mid-West Explo. Co.'s Clay 1, set cas 1718 ft. Schermerhorn Oil Co.'s Roberts 2, dr 2325 ft; Roberts 2-A, dk. Sprague Oil Co.'s Roberts 1, dr 2100 ft. Sun Oil Co.'s Settles 3, rig. Taylor-Link Oil Co.'s Kloh-Rumsey 1, lcn. Texon O. & L. Co. & Marland Prod. Co.'s Settles 2-A, dd, dr 2465 ft; Settles 3-A, rig; Settles 4-A, lcn; Settles 5-A, dr 155 ft. Ward Oil Co.'s Roberts 2, rig.

HUDSPETH COUNTY — Western States Oil Co.'s Gardner-Moseley 1, re-set cas 2930 ft; S. W. Moore 1, sd 2240 ft.

IRION COUNTY—Empire G. & F. Co.'s Sawyer 1, elev 2575 ft, top salt 835 ft, top lime 1765 ft, dr with show oil and gas 2055-59 ft. Kimbrough & Tuel's Nutt 1, dr 1205 ft. Mertzon Oil Co.'s Roach 1, dr with hfw 1475 ft. Moore & Kennedy's Tankersley 1, elev 2283 ft, pumping 10 bbls oil and 10 bbls water 1344-47 ft. Webb et al's Nutt 1, dr with hfw 1895 ft. West et al's Suggs 1, dr 305 ft.

JONES COUNTY—Campbell et al's Dickinson 1, dr 1085 ft. E. P. Campbell et al's Berry 1, lcn. Cowboy Evans et al's King 1, fsh 1560 ft. Hucony Gas Co. & Atkinson-Sandefer's Tiner 2, swab 35 bbls oil per hour 2538-49 ft; Tiner 3, fsh 1795 ft. Hurley Oil Co.'s Gunther 1, dr 2635 ft. McMan O. & G. Co.'s Tiner 1, dr 1010 ft. Marland Prod. Co.'s Mason 4, dr 985 ft. Mook-Texas-Roeser-Pendleton & Landreth's McCright 1, rig. Pandem Oil Corp.'s Cox 1, lcn. Phillips Pet. Co.'s S. Boy-Winters 1, dr 1290 ft; Sharp 1, elev 1881 ft, ur 2960 ft; Sharp 2, swab 250 bbls oil 12 hours 2522-35 ft; Walling-Tessie 5, dr 2120 ft. Roberts Oil Corp. & Cosden & Co.'s Grayson 4 and 5, dks. Roeser-Pendleton & Landreth's Grayson 1, dr 2255 ft. Roeser-Pendleton & Stebbins' Higgs 1-B, dk. Snowden & McSweeney's Bickley 1, dr 2410 ft. W. W. Zingery et al's Thomas 1, lcn. Texas & Cosden's Carter 2, lcn.

KENT COUNTY—Cosden & Co.'s Bilby 1, dr 1300 ft. Phillips Pet. Co.'s Sandell 1, dr 2635 ft.

KING COUNTY—Humble's Pitchfork 1, sd 4035 ft. Texas Co.'s Johnson 1, dr 3015 ft.

LOVING COUNTY—Lockhart & Co.'s Bowers-Wells 1, elev 2690 ft, top salt 730 ft, show oil, dr 4205 ft; Hubbard 1, elev 2693 ft, top salt 708 ft, dr 2310 ft; Fee-Lepp 1, co 4135 ft. Hadlock Oil Co.'s Russell 2, elev 2678 ft, top black lime 4230 ft, sd after shot, td 4395 ft.

MARTIN COUNTY — Phillips Pet. Co.'s Slaughter 1, elev 2726 ft, top salt 1685 ft, dr 3430 ft.

MENARD COUNTY—Moody Corp.'s Allison 1, elev 2053 ft, sd 2805 ft. Panhandle Ref. Co. et al's Eckhardt 1, dr 2130 ft. Renfro et al's Davis 1, sd 790 ft.

MIDLAND COUNTY—C. P. Shelton et al's Kloh 1, rig. O. H. Shoup et al's Parks 1, elev 2871 ft. top salt 1740 ft, sd 3085 ft.

MITCHELL COUNTY—E. P. Campbell et al's F. Pond 1, rig. Owen-Sloan Corp.'s G. M. Brown 1, top lime 1232 ft, dry and abn 1305 ft.

NOLAN COUNTY—Herbert Oil Co.'s Pepper 1, sd 485 ft.

PECOS COUNTY — Anderson et al's University 1, sd 1880 ft. Alexander-Lyles et al's Sellman 1, top salt 814 ft, sd 1008 ft. Benedum & Trees' Corder 1-A, top lime 1840 ft, fsh hfw 1900 ft. Ditto Oil Co.'s Montgomery 1-A, skid rig, td 170 ft. Bob Elmore et al's M. Holmes 2, sd 1845 ft. Fuhrman Pet. Corp.'s Ewing 1, elev 2325 ft, top salt 685 ft, top lime 1973 ft, dr 2100 ft. J. W. Grant et al's W. W. Turney 1, elev 2592 ft, dr 3805 ft. Olean Pet. Corp.'s Harral 1, elev 3005 ft, top salt 845 ft, top lime 2540 ft, dr 2820 ft. Pecos Valley Oil Co.'s Fee 1, dr 250 ft. Phillips Pet. Co.'s Heyman-Nutt 1, elev 2943 ft, top lime 2085 ft, dr 3800 ft. Roxana & Kirby Pet. Co.'s University 1, cem cas 3605 ft. Schumaker et al's Williams 1, spudded and sd. Southern Crude Oil Pur. Co.'s Scharbauer 1, elev 2680 ft, fsh 2886 ft. Transcontinental's University 1, elev 2552 ft, top lime 1035 ft, dr dark lime 3700 ft. Vacuum Oil Co.'s Elsinore 1, elev 3554 ft, reaming 4070 ft. P. R. Whonlich & Co.'s Arnold 1, dr 325 ft. World Oil Co.'s Kloh 1, elev 2810 ft, fsh 3106 ft.

PRESIDIO COUNTY — Empire et al's Tootle 1, spudded and sd. L. C. Brite et al's Fee 1, machine.

REAGAN COUNTY—Empire G. & F. Co.'s Sawyer 1-A, lcn.

REEVES COUNTY—E. W. Brooks et al's Eddins 1, fsh 5658 ft. Eastland-Vacuum & Geo. Lyles Campbell 1, dr 1775 ft. Exploration Co. et al's Kinney 1, elev 2847 ft, sd 2900 ft. McRobie et al's Bell 1, sd 500 ft.

RUNNELS COUNTY—Agnew & Sons' Russell 1, dr 2300 ft. Gibson-Johnson et al's Rainwater 1, sd 2500 ft. Kennedy et al's Talley 1, sd hfw 3000 ft. Nourse & Tilton's Cramer 1, rig. Pure Oil Co.'s Giesecke 1, ur 1290 ft.

SCHLEICHER COUNTY—Long Bros. et al's Williams 1, spudded and sd.

SCURRY COUNTY—R. B. Pender et al's Davis 1, rig.

STERLING COUNTY—Manhattan Oil Co. et al's Ellwood 1, dr 3295 ft.

STONEWALL COUNTY — Henshaw Oil Corp.'s Moore 1, dr 3330 ft. Sun Oil Co.'s Rayner 1, dk.

SUTTON COUNTY — Phillips Pet. Co.'s Holman 1, dr 3145 ft.

TERRELL COUNTY—Big Bend Oil Corp.'s Bassett 1, spudded and sd. Champlin Ref. Co.'s Carter 1, elev 2884 ft, cavey hole 3552 ft. Milham Corp.'s Bassett 1, elev 2270 ft, dr 3875 ft. Keck-Pecos Oil Trust's Hamilton 1, dr 1420 ft.

UPTON COUNTY—Buell & Hagan's Robbins 1, top salt 570 ft, dr 665 ft. Cordova Union Oil Corp.'s Fee 1, casing off tools 560 ft. F. P. Zoch et al's Union-Murphy 1, top salt 565 ft, dr 1470 ft.

VAL VERDE COUNTY — Val Vert Oil Corp.'s Bassett 1-A, skid rig.

WARD COUNTY — Denver Prod. & Ref. Co.'s Cherokee Fee 1, dr 2430 ft. E. B. Lovelace et al's J. C. Redman 1, lcn. Rector Oil Co. et al's M. L. Johnson 1, lcn. Shipley et al's Hayslett 1, dr 720 ft.

WINKLER COUNTY — V. T. Bolin & Co.'s Brown 1, elev 2847 ft, top salt 1302 ft, sd showing oil and gas after shot, td 3211 ft; Brown 2, dk. Empire G. & F. Co.'s Daugherty 1, dr 1285 ft. Arizona Mining & Eng. Co.'s Hendricks 1, top salt 1390 ft, top lime 2607 ft, sd for cas 2630 ft. Roxana & Llano Oil Co.'s Scarborough 3, elev 2939 ft, top salt 1280 ft, top lime 2972 (corrected) ft, dr 2992 ft. Sid Richardson & White Eagle O. & R. Co.'s O'Brien-Stockton 1, elev 2729 ft, co 1900 ft. TP Coal & Oil Co.'s Daugherty 1, elev 2881 ft, top salt 1460 ft, top lime 2894 ft, dr cem plug 2895 ft.

TEXAS GULF COAST

Company, well and Location	Initial Production Bbls.	Depth Completion
FORT BEND COUNTY—		
Gulf, Trone 8, Long Point	* 3665	

AUSTIN COUNTY—Humble's Gotosky 3, Raccoon Bend, dr 2200 ft shale and lime; Bracey 1, Raccoon Bend, dr 3177 ft sandy shale; L. R. Urban 1, Raccoon Bend, dr 703 ft shale. L. H. Weadock's Ward 1, sd 2260 ft. Gulf's Jackson 1, near Sealy, lcn.

BRAZORIA COUNTY—Roxana's Randon 1, Allen Dome, r at 5517 ft. Poole A-2, Allen Dome, dr 4122 ft sand. D. J. Harrison's Perry 1, Stratton Ridge, moving in.

CHAMBERS COUNTY—Pure Oil Co.'s Old

Ayer & Lord Tie Co.

Incorporated 1893

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Bridge Timbers Car Stocks Piling Posts

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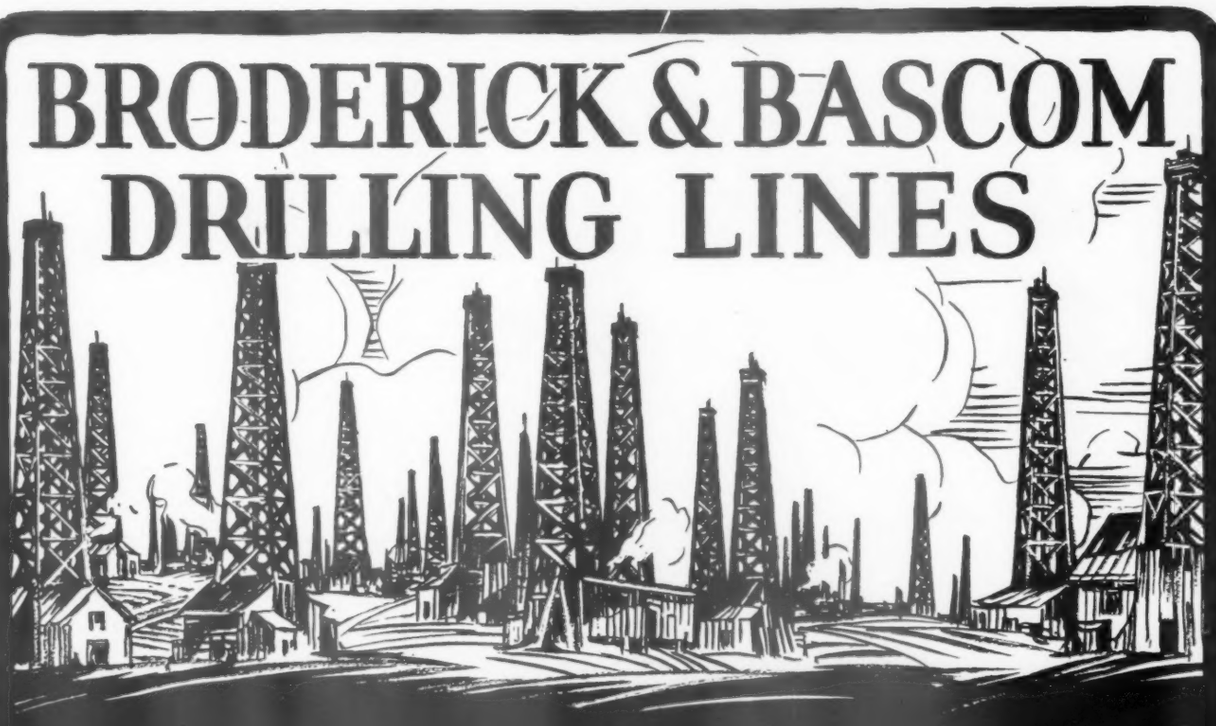

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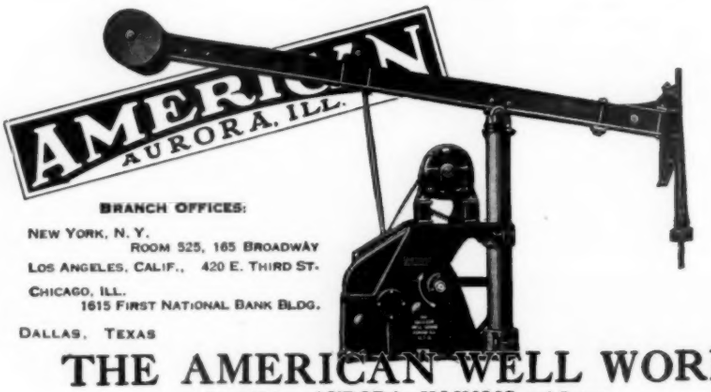

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River 1, Lost Lake, ran Edwards sand tester, tested salt water, will go deeper, td 3705 feet; Lost Lake 1, Lost Lake dome, fsh for stuck drill stem at 3375 feet; Lost River 1, Lost Lake dome, dr 4522 ft cap rock; Trinity River 1, Lost Lake dome, dk; Lost River 1, Lost Lake dome, dk; Cut-Off Bayou, Lost Lake dome, dk. R. L. Bartlett's Fisher 1, Barbers Hill, sd 2160 ft.

COLORADO COUNTY—Rich Oil Co.'s Von Rosenberg 1, 2½ mi ne of Columbus, waiting on rig; Wallace 1, 1½ mi n of Alleyton, sd 1375 ft. U. S. Oil & Gas Co.'s Swank 1, 6 mi s of Rock Island, dr 2552 ft gbo. Humble's Harbert 1, 2 mi se Altair, dr 325 ft shale.

FORT BEND COUNTY—Sun Oil Co.'s E. C. Farmer 3, Boling, dr 3010 ft sand rock. Gulf's Trone 8, Long Point, abn 3665 ft; Wolf 10, Long Point, dr 700 ft; Moore 16, Moore's Field, dr 2825 ft rock. Humble's Sugarland Industries 3, Sugarland dome, dr 2033 ft gbo; Deathridge 1, Sugarland dome, dr 3687 ft sandy shale; Camp 1, Sugarland dome, dr 992 ft rock; Dew 1, Sugarland, dk; Sugarland Industries 2, Sugarland dome, dr 3393 ft shale. J. H. Diehl's Armstrong 1, 2 mi e Boling, sd 475 ft. The Texas Co.'s E. Farmer 1, Boling, dr 4284 ft sand and shale with odor of gas; Bushness 1, Boling, dr 35 ft sandy clay.

GALVESTON COUNTY—Long et al's Irvin & Bishop 1, s Dickinson dr 2225 ft shale, lime.

HARDIN COUNTY—Chappel Hill Oil Co.'s Hale 1, 5 mi nw Sour Lake, sd 1810 ft. Guedry Drilling Co.'s Guedry 1, 2 mi s Batson, dk. The Texas Co.'s Cruse 1, Batson, dr 3528 ft rock.

HARRIS COUNTY—Torsen et al's Stewart 1, 4 mi sw Genoa, ru. J. A. Hautier's Grouse 1, Green's Bayou, dr 2795 ft shale and lime. Hunt et al's Lobit 1, 4 mi n Goose Creek, sdtr at 750 ft, td of hole 2148 ft. Humble's Warren 4, Hockley, dr 3861 ft shale; Minnatex 1, near Mykawa, lcn. Cedar Bayou Oil Co.'s Johnson 1, 8 mi n Goose Creek, dr 2752 ft gbo. The Texas Co.'s House 21, Humble, dr 3716 ft shale. Drummett et al's Brock 1, Almeda, dr 4142 ft shale and lime. M. & S. Oil Co.'s Cook 1, 2 mi ne Crosby, dr 2300 ft gbo. Brains et al's Lentze 1, sd 1120 ft. Mrs. Baldwin et al's Kitsman 1, 2 mi n Cypress, sd 1925 ft.

JEFFERSON COUNTY—Deep Test Oil Co.'s McFaddin 1, 4 mi ne Spindle Top, sd 2175 ft. Gulf's Bordages 6, Fannett, set cas at 4540 ft. So. Spindle Top O. & Dev. Co.'s Young 1, 1 mi w Nederland, sd 3425 ft. Port Arthur O. & Dev. Co.'s West 4, Westbury, sd 4740 ft. A. M. Deems et al's Mashman 2, 1 mi s Voth, lcn. The Texas Co.'s Gladys City 1, Spindle Top, dr 5459 ft shale and hard lime. Beaumont Oil Co.'s Tyrrell 1, 2 mi w of Brooks, dk.

LIBERTY COUNTY—Barlow et al's Minchcliff 1, 2½ mi ne Cleveland, sd 2215 ft. Big Dome Interests' Finley 1, 2½ mi nw Hardin, r 3275 ft; Finley 2, dk. Humble's Sterling 2, Moss Bluff, dr 1924 ft shale and lime; Welder 8, S. Dayton, dr 3480 ft shale and lime. Sun Oil Co.'s Kyle 1, Moss Bluff, dr 1835 ft gbo.

MATAGORDA COUNTY—Matagorda County Dev. Co.'s Hawkins 1, Bay City, sd 1985 ft. Dr. P. S. Griffith et al's Robbins 1, e Citrus Grove, dr 1525 ft lime; Baer 1, 1½ mi n Gulf Hill, dr 1300 ft shale.

WALLER COUNTY—J. R. Young's Fee 2, 10 mi s Hempstead, dr 715 ft.

WASHINGTON COUNTY—Sun Oil Co.'s Schirmer 1, Brenham, dr 4150 ft shale.

SOUTH LOUISIANA

Completion

CAMERON PARISH—
Calcasieu Oil Co., Magnolia and Union Sulphur Co., Watkins 4, Kelso Bayou 20 3987

ACADIA PARISH—E. F. Simms' Clement 1, Jennings, r to set cas around 3750 ft; Clement 2, Jennings, bldg dk; Grace 1, Jennings, bldg dk.

ASCENSION PARISH—Gulf's United Lands Co. 9, Sorrento, ru. Triumph Oil Corp.'s Lacey 1, 1½ mi se Sorrento, repairing rig, td 2575 ft. Baton Rouge Pet .Co.'s Liotta 1, dr 600 ft.

CALCASIEU PARISH—Union Sulphur Co.'s Fee 729, Sulphur, dk; Fee 728, Sulphur dome, dr 4877 ft gbo; Fee 730, Sulphur dome, dr 4625 ft gbo; Kelly 1, Sulphur dome, dr 4262 ft lime; Fee 731, Sulphur, lcn; Fee 732, lcn. Lehay et al's Jones 2, sd 1165 ft.

CAMERON PARISH—Pure's Sweet Lake 2, Sweet Lake, waiting on orders; Sweet Lake

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3, Sweet Lake, fsh at 6392 ft; Sweet Lake 4, Sweet Lake, flowing 325 barrels not oil and 80 per cent. water after cleaning out screen, td 5924 ft; Sweet Lake 5, Sweet Lake, flowing 3800 barrels net oil per day; Sweet Lake 6, Sweet Lake, dr 378 ft. La. Land & Explo. Co.'s Calcasieu Lake B-2, ½ mi ne Kelso Bayou dome, coring sand with oil show at 4025 ft; Calcasieu Lake A-2, Kelso Bayou dome, set and cemented cas at 1505 ft. Calcasieu Oil Co., Magnolia, and Union Sulphur Co.'s Watkins 8, Kelso Bayou, td 3800 ft; Watkins 9 set cas at 3733 ft; Watkins 10, dr 3090 ft gbo and boulders. Watkins 11, dr 496 ft; Dioron 3, dr 3886 ft; Valery 2, dr 3945 ft sand showing oil; Yount-Lee Oil Co.'s State Land 14, Kelso Bayou, dr 675 ft; State Land 15, Kelso Bayou, lcn; State Land 16, Kelso Bayou, dr 1000 ft; State Land 17, Kelso Bayou, lcn. Roxana's Watkins 3, Black Bayou District, bldg dk foundation.

IBERIA PARISH—La. Land & Explo. Co.'s Vermilion Bay A-2, dr 3560 ft lime; Avery Island Ld. & Dev. Co. 2, Avery Island, lcn. Gulf's State Z-5, Loreauville, dr 575 ft.

IBERVILLE PARISH—Roxana's Wilbert 2, White Castle, dr 3531 ft sand. Standard of La.'s Wilbert 1, ru.

JEFF DAVIS PARISH—Welch Pet. Co.'s Purveiance 1, Welsh, dr 4440 ft gbo.

LA FOURCHE PARISH—Gulf's Stak 5, Thibodaux, dr 1130 ft.

ST. LANDRY PARISH—A. E. Borsum et al's Brown 1, lcn.

PLAQUEMINE PARISH—Gusher Bill O. & G. Co.'s Park Plantation 1, sd 2050 ft.

ST. MARTIN PARISH—Rycade's Bayou Boullion 3, ru; State 1, Bayou Boullion, will deepen from 2850 ft; Martin 1, Bayou Boullion, dr 3905 ft sand. Yount-Lee Oil Co.'s Louisiana Pet. Co. 2, Anse la Butte, coring 3747 ft. A. G. Broussard's Bergeron 1, Anse la Butte, dr 895 ft shale. Bowie O. & G. Co.'s Begnaud 4, Anse la Butte, cleaning out, td 3920 ft. Ohio Oil Co.'s Martin et al 3, Hager Dome, lcn; Burke 2, will deepen from 1125 ft.

ST. MARY PARISH—J. Dannenbaum's Viguerie 1, Charenton Beach, sd.

WEST BATON ROUGE PARISH — Grosse Tete O. & G. Co.'s Wilbert 1, preparing to deepen from 1325 ft.

WEST FELICIANA PARISH—Foster & Roberson's Raccourci 1, sd.

SOUTHWEST TEXAS

Completions

WEBB COUNTY—		
Cole Pet. Co. No. 63,	100	2344
Houston Oil Co., Laurel D-7, sec 73	565	2344
Laurel D-2, sec 73	150	2336
Magnolia, Valdez 6	300	2342
Wm. R. Jewell, Bruni 2, Albercas Grant, Blk. 56 No. 45		
ZAPATA COUNTY—		
Gleason Oil Co., Benavides 1, sec. 11 No. 25		1493
JIM HOGG COUNTY—		
Edward St. Albans, Holbein 3, Las grant, Blk 43, share 3	*	2182

CALDWELL COUNTY—Radcliff et al's Briscoe 1, 3 mi ne Luling, td 2975 ft. Datex Oil Co.'s August 1, Branyon dist, td 2900 ft. Luling O. & G. Co.'s Carter 2, fsh 2865 ft. Cranfill & Reynolds' Starke 2, W. Lockhart, dr 1500 ft; Starke 3, ru. Suttle et al's Malone 1, ru. M. R. Armstrong's Martin 1, sd 1040 ft. Roxana Pet. Corp.'s Jolly 2, w of Lockhart, dr 100 ft; Jolly 4, lcn. T. C. Hadley's Wilson 1, dk. Lu-Tex Oil Co.'s Davis 2, ru.

DUVAL COUNTY—National Oil Co.'s Bell 1, sd 2770 ft. R. Driscoll's Fee 2, dr deeper after testing at 2880 ft.

HIDALGO COUNTY—Dale Smith's Daskan 1, testing at 3780 ft. Queen City O. & G. Co.'s American Land & Irrig. Co. 2, 3 mi n Mercedes, sd 700 ft.

JIM HOGG COUNTY—Edward St. Albans' Holbein 3, abn at 2182 ft; Holbein 4, lcn, blk 34, share 3, Las Animas grant.

JIM WELLS COUNTY—Cushing Oil Co.'s Perez 2, 3 mi n Alice, sp.

KINNEY COUNTY—Stephens et al's Clamp 1, sd 1515 ft.

MAVERICK COUNTY—Rycade Oil Corp.'s Chittam 1, Eagle Pass, td 5630 ft; Chittam 2, Eagle Pass, td 6600 ft. Sullivan 3, Eagle Pass, dr 650 ft. Ryan Consolidated's India Land Co. 1, 24 mi se Eagle Pass, dr 4600 ft.

NUECES COUNTY—May et al's Gallagher 1, dr 575 ft. Grimm & Morris' Garrett 1, Aqua Dulce, dr 1515 ft.

STARR COUNTY—The Texas Co.'s Guerra 1, near Roma, dr 4514 ft hard sandy shale.

VAL VERDE COUNTY—East Del Rio's Weatherbee 1, sd 3335 ft. Thraves et al's Wilson 1, sd 1125 ft.

NORTHERN CALIFORNIA

Completions

McFARLAND—		
General Pet. Corp., Stiles 1, 35-25-25	*	5770

KERN COUNTY

ARVIN—Texas Co.'s Pauley 1, 22-31-29, dr shale and sand, 4431 ft.

BAKERSFIELD—Pacific Eastern Prod. Co.'s KCL 3, 6-30-28, shut in after producing 4,000,000 cu. ft. gas for several days.

BELRIDGE—Zurich Oil Co.'s 1, 18-28-22, sd 2790 ft.

BUTTONWILLOW — Doheny-Stone Drill Corp.'s Salisbury 1, 7-29-24, sd 4280 ft. Mil-

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MALONEY Tanks are outstanding for true economy because, while they cost no more than ordinary bolted steel tanks, (1) their *unusual durability* reduces replacement expense, and (2) their *exceptional tightness* cuts evaporation losses to a minimum.

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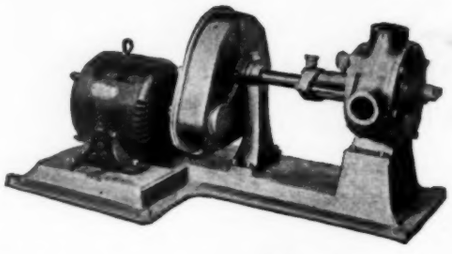

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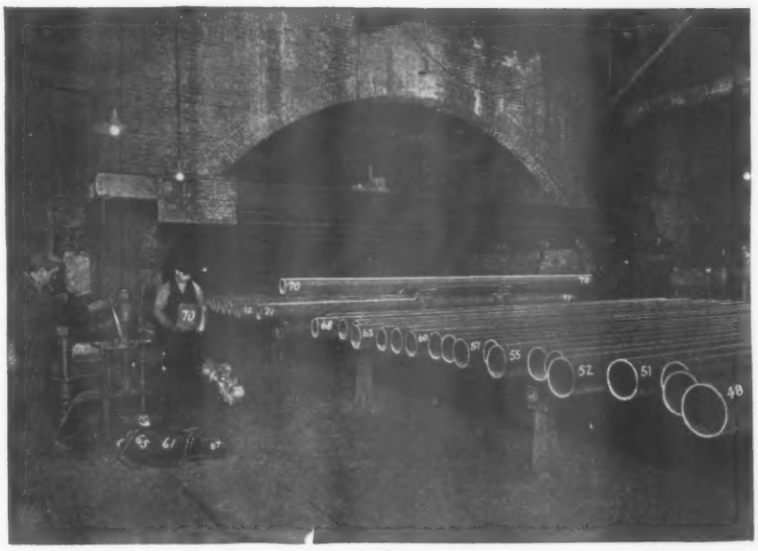

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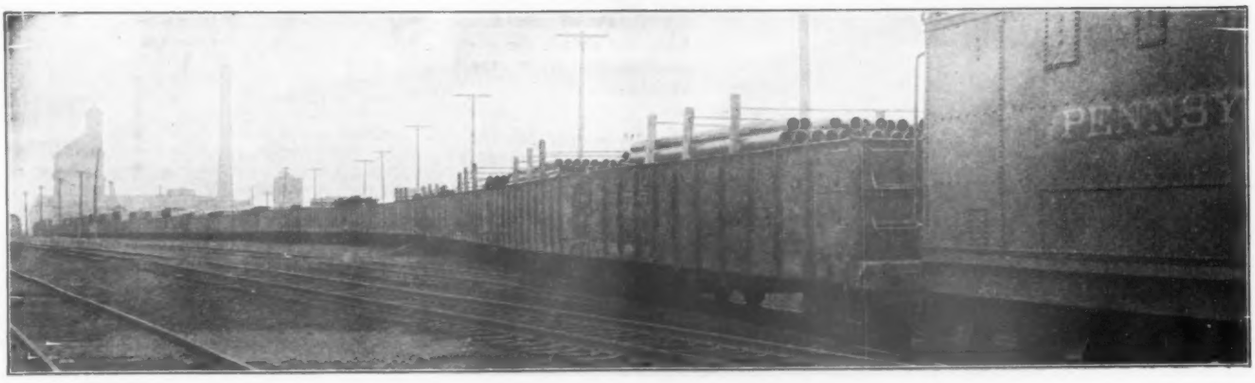

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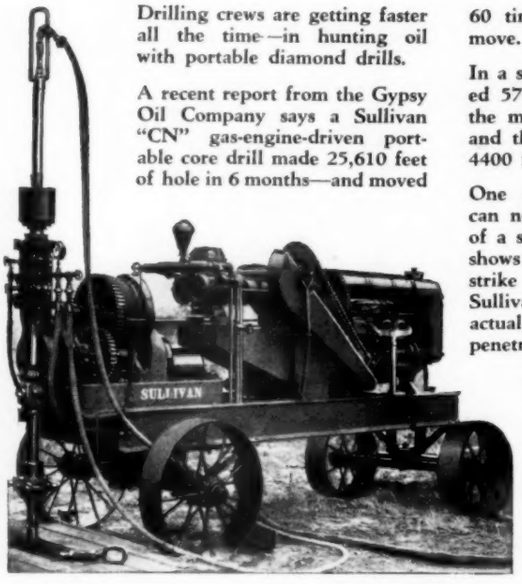


Drilling crews are getting faster all the time—in hunting oil with portable diamond drills.

A recent report from the Gypsy Oil Company says a Sullivan "CN" gas-engine-driven portable core drill made 25,610 feet of hole in 6 months—and moved 60 times, 1 to 18 miles at a move.

In a single month the drill bored 5702 feet in 14 locations—the month before, 5404 feet—and the 6-months' average was 4400 feet a month.

One or two whole townships can now be tested for the cost of a single wildcat well—which shows nothing if it doesn't strike oil. Cores obtained by Sullivan Diamond Drills are actual samples of all the strata penetrated. They show the exact depth of the key bed, and enable the geologists to trace the anticline.

Have you sent for the free 80-page handbook, "Diamond Drilling for Oil?"

Sullivan Machinery Company
419 PEOPLES GAS BLDG., CHICAGO

ham Explo. Co.'s Page 1, 6-28-23, 11¾-inch cas cmt 2430 ft, td 2450 ft. Southern Calif. Gas Co.'s 1, 4-28-23, liner bad, sd 4272 ft.

COMANCHE POINT — W. W. Stabler's Tejon 1, 23-32-29, will deepen from 2332 ft, failed to produce on test.

DELANO—Jasmine Oil Co.'s 1, 33-25-27, dr brown shale 2812 ft, oil show 2600 ft. S. A. Delzel's Vedder 1, 4-26-27, rigging up.

EDISON—General Pet. Corp.'s Kerwin 1A, co 3900 ft, pumped oil and water above plug at 3944 ft; Kerwin 5, 32-29-29, 18⅝-nich cas cmt 865 ft, td 870 ft. Midway Northern Oil Co.'s Brown 1, 29-29-30, sd 3575 ft.

FAMOSA—Famosa Oil Co.'s 1, 34-27-26, dr shale 2353 ft.

GOULD HILLS—Bomke & Ball's 1, 19-29-20, dr shale 1828 ft. Exeter Oil Co.'s Parry 1, 1-29-20, dr shell 1157 ft. H. B. Porter's 1, 36-28-20, dr shale and shells, td 1507 ft. Ozena Oil Co.'s 1, 27-29-21, dr shale and sand 2912 ft.

McFARLAND—General Pet. Corp.'s Stiles 1, 35-25-25, abn 5770 ft.

SHAFTER—North American Royalties' McVey 1, 8-28-25, sd 2545 ft.

SEMITROPIC—Lincoln Drilling Co.'s Kerwin 1, 21-26-22, dr blue shale 2911 ft.

TEHACHIPA—Crusaders Oil Co.'s 1, 21-10-10, making casing test 2370 ft.

TEMBLOR—Jackson & Chamberlain's 1, 36-29-20, sd 760 ft.

WASCO—Main Oil Co.'s 2, 28-27-24, sd 5275 ft.

VENTURA COUNTY

BARDSDALE — Triple A. Investment Co.'s 1-E, 28-4-19, running 8⅝-inch cas to carry.

CAMARILLO—American Oil Co.'s 1, 33-2-20, dr 403, basalt.

FILLMORE—Henry Demound's 1, 19-4-19, ur 411 ft.

OJAI — Continental's Fox 1M, 21-4-22, dr shale 1919 ft; Thompson 1, 22-4-22, fsh for lug 1660 ft. California-Ventura Oil Co.'s 4A, 33-4-23, sd 1255 ft. J. W. Hackworth's McDonald 1, 11-4-23, sd 2215 ft.

OXNARD—Shell's Grub 1, 22-2-22, fsh for dr pipe 4250 ft; Cohn 1, 22-2-22, dr sand and shale, td 1580 ft.

PIRU—Petroleum Securities' Diablo 1, 26-5-10, fsh 5550 ft.

RINCON—Scott Pet. Co.'s 1, 35-4-25, bailed dry, showed some oil, td 4450 ft.

SANTA PAULA—W. W. Bryant's Anlauf 1, 21-4-21, pumping 10 bbls oil, td 740 ft. San Pedro-Pt. Fermin Synd.'s Kellerman 1, dr hard sand 643 ft.

SATICOY—Shell's Berylwood 1, 32-3-20, pumping water 7241 ft. Emma F. Exline's Seaton 1, 32-5-21, redr 1616 ft.

SOUTH MOUNTAIN — Ring Pet. Corp.'s Converse 1, dr 4413 ft, 3500 ft oil in hole.

VENTURA—Star Pet. Co.'s Canet 1-A, 13-3-23, 8⅝-inch cas cmt 5947 ft.

MISCELLANEOUS

COLOUSA COUNTY — Continental's 1-A, 31-18-4 fsh 4300 ft.

FRESNO COUNTY—Fresno-Madera Synd.'s 1, 18-12-21, sd 4150 ft.

HUMBOLDT COUNTY—Eureka Oil Co.'s 1, 21-4n-1w, changing to rotary, td 2380 ft.

KINGS COUNTY—Milham Explo. Co.'s Elliott 1, 2-22-17, redr 6676 ft. California Oil Co.'s 1, 12-23-19, moving in rig material.

MONTEREY COUNTY—Marland Oil Co.'s Naciemento 1, 32-24-11, dr hard shale 4718 ft.

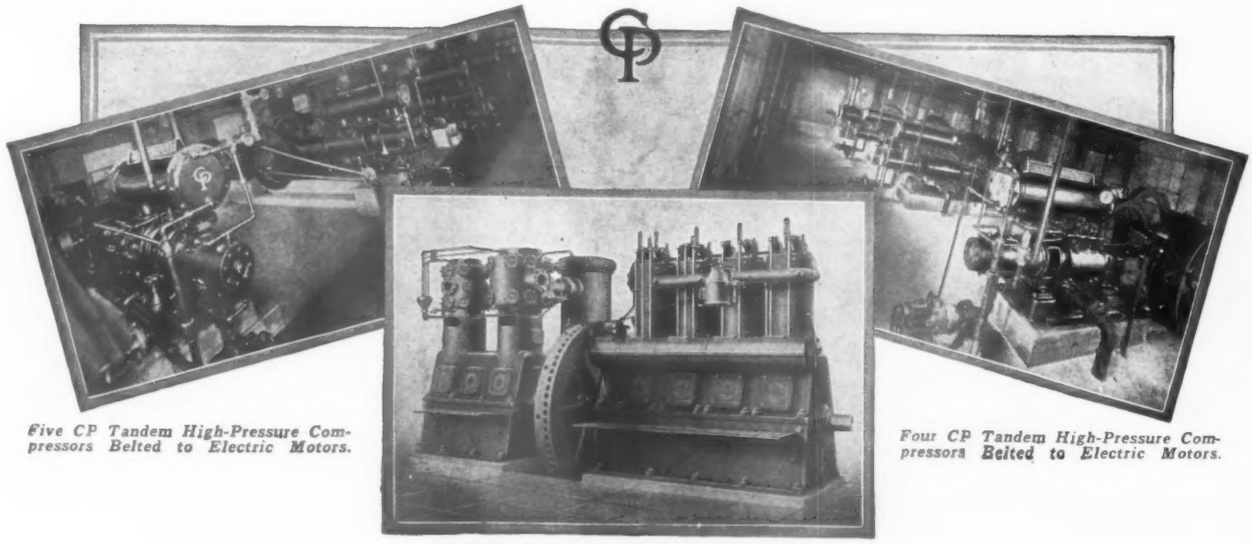
SAN LUIS OBISPO COUNTY—Holland & Kennebrew's Vishu 1, 22-32-22, sd 1790 ft. Indian Dome Oil Co.'s 1, 25-31-12, dr shale 2740 ft. North Star Oil Co.'s 1, 5-32-13, co 1400 ft, td 3250 ft. Panorama Oil Co.'s 1, 7-31-21, running 6¼-inch cas 2820 ft. San Luis Synd.'s 2, 31-31-13, sp 7-28-28, dr. Union Oil Co.'s Rust 1, 34-32-15, redr 1700 ft, td 3073 ft; Chandler 1, 12-32-15, dr sand and shale, td 3081 ft. Waklin Pet. Co.'s 1, 27-27-11, 4½-in cas standing cmt 2610 ft.

SANTA BARBARA COUNTY—Channel O. & Dev. Co.'s 1, 29-4-27, sd 6025 ft. Tepusquet Oil Co.'s 1, 3-9-32, d hard sand 2650 ft. Summerland Oil Co.'s Becker 1, co to bottom, dr 3060 ft.

SAN MATEO COUNTY—Shell's Butts 1, 21-6-5, dr shale 3037 ft; Cowell 2, 8-6s-5w, testing 8¼-inch cas landed at 2645 ft, td 2665 ft.

SONOMA COUNTY—Shell's Mossi 1, 8-5-7, flowing dry gas, td 2140 ft.

TULARE COUNTY—Ducor Drilling Co.'s 1, 29-23-27, co 4110 ft, td 4160 ft.



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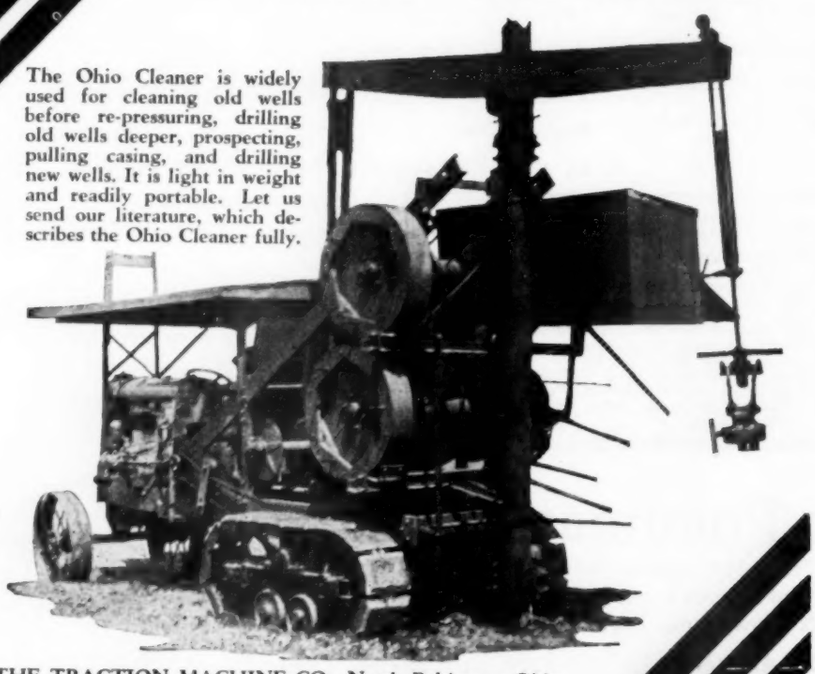

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SOUTHERN CALIFORNIA

BELLEFLOWER — World Pet. Corp.'s Blythe 1, will deepen from 2915 ft, oil and gas showings.

CALABASAS—Easton & Smith's Morrison 1, dr 2806 ft, sand shows slight cut.

CHATSWORTH—Russell Pet. Co.'s Joughin 2, dr 277 ft, using cable tools.

COSTA MESA—Mesa Pet. Corp.'s B. & G. 1, setting string of 11-inch cas at 3200 ft to test 50 ft of sand.

DAVIDSON CITY — Calif Well Drilling Co.'s Del Amo 1, swabbed to 4500 ft, will bail to bottom and test for production, td 7662 ft.

DOMINGUEZ — Dominguez Extension Oil Co.'s R. B .1, sd 5510 ft.

DOWNEY—Associated's Taylor 1, bldg rig.

FULLERTON—Shell's Stern 1, coring 5683 ft.

INGLEWOOD—Ring Pet. Corp.'s Simons 1, cmt off fsh 4350 ft.

LYNWOOD—Security Pet. Corp.'s Community 1, sd 5335 ft.

MONTEREY PARK—Monterey Park Pet. Corp.'s Browning 1, co to run 6¼, td 4530 ft.

PUENTE HILLS—Anchor Pet. Co.'s Hudson 1, will deepen from 3640 ft, would not prod.

RIVERA—Empire Drilling Co.'s 1, 8-2-28, dr 200 ft.

SAN FERNANDO—Shell's Mission 2, sdtr i on 3535 ft.

SAN JUAN CAPISTRANO—O. K. Carr's Foster 2, sd 4185 ft.

WATSON — White-Behr Consolidated Oil Co.'s Watson 1, sd 5300 ft.

MISCELLANEOUS

RIVERSIDE COUNTY—Clark, L. R. Banning 1, sd 1812 ft. Hall Pet. Co.'s 1, dr 803 ft. Hemet Pet. Corp.'s Ward 1, sd 2880 ft. Spindletop Oil Synd.'s 1, reaming 3463 ft. Trabuco Oil Co.'s 1, sd 3360 ft.

SAN BERNARDINO COUNTY—Hesperia O. & G. Co.'s 1-A, plugged to 2000 ft, td 3310 ft. Western Pacific Oil Co.'s Well 3, co 3100 to cmt 6¼-inch cas.

SAN DIEGO COUNTY—Davenport O. & G. Co.'s MacGregor 1, dr lime and sand 1574 ft. S. S. Turner's Baler 1, preparing to run 6¼ for water shutoff, td 1245 ft. C. R. Schuster's Ganymede 1, dr hard black shale 3514 ft.

MOUNTAIN STATES

WYOMING

BIG HORN—Utah Southern Oil Co., 3, 29-56n-97w, dr 3498 ft. Producers & Refiners, 3, 24-56n-98w, stand. cem at 2555 ft. Cross Gas Co., cas cem 1934 ft. Ohio Oil Co., Cross Gas 2, dr 3293 ft. C. F. Robertson 1, 19-54-93, cmtd 1116 ft.

CARBON—Graybeal Dome Synd., 16-28n-80w, cas trouble 4600 ft. Indian Pete Corp., 2-17n-89w, dr 200 ft.

CONVERSE—Hollingsworth & Gorham, ne 8-32-72, water at 800 ft. Criterion, Irvine 1, 5-31-70, sd.

FREMONT—Producers & Refiners, Muskrat 1, 34-34-92, co after run. 6¼-in. at 4070 ft. Texas Prod Co., Alkali Butte 1, 1-33-95, fsg bit.

HOT SPRINGS—Texas Prod Co., sw 23-45n-100w, bldg roads.

JOHNSON—Fairway Oil Co., Crazy Woman 1, 7-47-82, resum 2367 ft.

LINCOLN—Midwest Explo Co., Waterfall 1, sw 35-22-113, td 901 ft, ready to undrrm. Quad States Enterprise, Inc., 11-19n-116w, dr bel 1100 ft. Susie J. Quealey, 20-21n-115w, dr bel 100 ft. Midwest Refining Co., se 36-37-117, location.

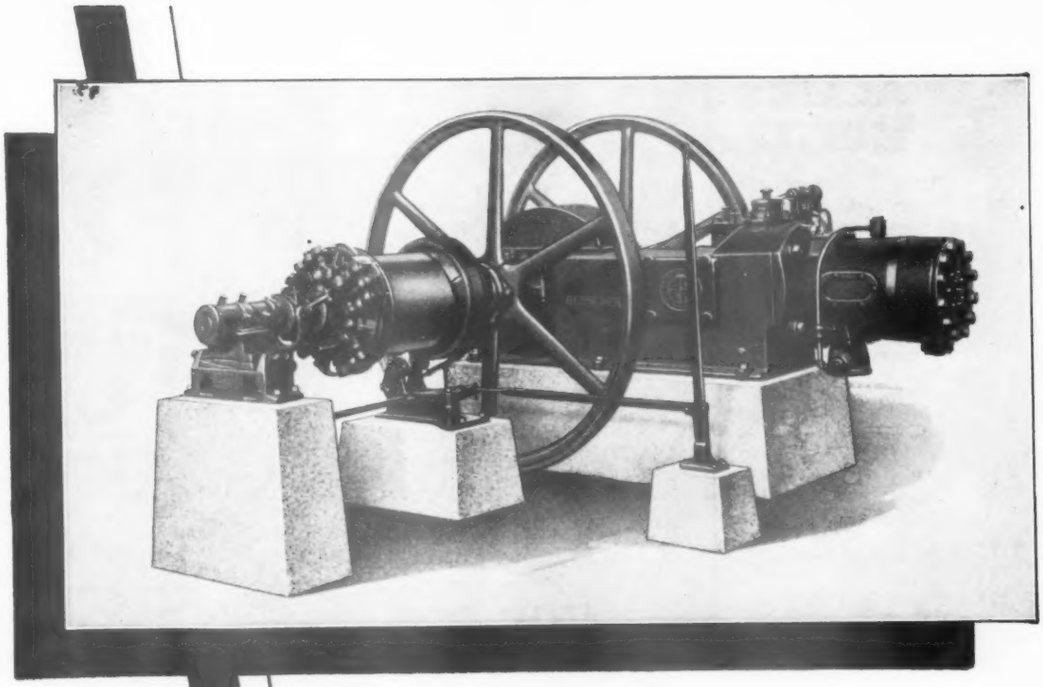
NATRONA—M. C. Weisman, nw 1-36-82, drilling 200 ft.

NIOBRARA—Buck Creek Oil Co., 4-36n-62w, dr 2565 ft.

PARK—Calif Exploration Co., 1A, 29-48-103, dr 2500 ft. Fred G. Ostland, Hoodoo Ranch 1, 23-51-102, td 1740 ft. E. H. Rosenburg, 25-58n-98w, dr bel 2040 ft. California Expl Co., and P & R, Pitchfork 1, 14-48n-102w, sdetr 15½-in. at 780 ft. Ohio Oil Co., 27-52-100, co 3685 ft. Lenco Pete Co., 27-52-100, sd 100 ft. Ydoc Oil Co., ne 6-15n-101w, sd 735 ft. Union of Calif., Taylor 1, 22-47-101, co 3780 ft. N. F. Clark et al, se 11-49n-102w, dr 1800 ft. Resolute Oil Co., nw 17-57-101, dr 1450 ft. S. C. Ferdig, Nelson 1, 4-51-102, rig up.

PLATTE—Walter Adams, Trustee, 13-25-66, set cas and cem.

SUBLETTE—California interests, 17-27-113, moving in. California Co., Wyss 1, 12-32n-



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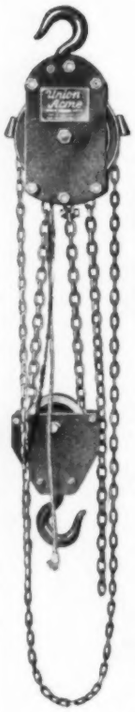

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115w, dr 125 ft. California Co., Bushell 2, 11-29n-115w, dr 851 ft.

SWEETWATER—Prairie O & G Co., Tucker 1, 18-13-99, dr 1425 ft. Ohio Oil Co., Posten 2, 22--16n-99, d illing. Sormir Pete 13-21-100, fsg 1330 ft.

UINTA—California Co., U. P., 1, 7-17n-116w, dr 1412 ft.

UTAH

GRAND—Utah Oil Refining, Moab Consolidated, Utah Southern, Salt Valley 1, 13-23-21, td 375 ft, completing fishing job. Utah Southern and Moab Consolidated, Shaffer 1, 36-26-20, unable to run 10-inch owing to bad hole around 150 ft, will drill ahead and then run 8¼-inch, total depth 1665 ft. Navajo Pet. Co., 2-20-21, waiting completion of water line, td 1400 ft. Western States Dev. Co., 1, sw 27-21s19e, dr 1600 ft. Big 6 Oil Co., Randall 1, 10-22-19, dr 800 ft. Brendell Sons, Crescent Eagle 2, 9-22-19, spdg.

NAVAJO RESERVATION—Continental Oil Co.'s Boundary Butte 1, 31-43-21, sdtr tools at 3680 ft.

SAN JUAN—Boulder Knoll O. & G. Co., 1, 17-34-25, ur 6¼-inch to bottom for water shutoff.

UINTA—Western Venture Oil Co., Krumvieda 1, 6-5-21, cem cas to 923 ft. Madue Ellen Oil Co., 1, 28-3-21, resum at 1080 ft.

MILLARD—Beaver Valley Oil Co., Blackrock 1, 20-25s-9w, dr 3400 ft.

UTAH—Diamond Oil Co., 3, ne 28-8s-4e, fsh tools 1550 ft.

WAYNE—Phillips Pet. Corp., 16-27-16, run 10-inch at 2580 ft.

MONTANA

BLAINE—Ohio Oil Co., No. 1 Winngert, 3-34n-22e, dr 900 ft.

CASCADE—Winther et al, No. 1 Roth, cw 11-22-1e, sd 1010 ft.

CARBON—Ohio Oil Co., Northern Pacific 1, 11-7s-21e, cem bit at 4228 ft.

CHOTEAU—Williston-Shelby, Flack 1, se 12-28-11e, dr 2240 ft.

GARFIELD—Carroll Bros., ne 6-14n-31e, dr bel 950 ft.

HILL—Jones Oil Co., Mangnell 1, 32-32-14, will use as water well. Jones Oil Co., Mangnell 2, nw 32-34-14, rig. McFarland et al, Boxelder 1, sw 15-30-13e, dr 1900 ft.

LIBERTY—Square Deal Oil Co., Federal Land Bank 1, se 1-32-72, dr 1800 ft.

PONDERA—Calpet, Copley 1, ne 14-27-4w, producing at 1941 ft. Continental Dev. Co., Gjullin 2, ne 15-27-4w, 255 bbls. at 2015 ft. Calpet, Kingsbury 1, sw 15-27-4w, dr 1970 ft. Texas-Pacific Coal & Oil Co., Hirshberg 2, 14-27-4w, oil in the Madison at 1936 et. Texas-Pacific Coal & Oil Co., Hirshberg 3, 14-27-4w, dr 900 ft. McCracken et al, Giullin 1, 10-27-4w, lost hole; skidding. Ohio Oil Co., Hirshberg 1, 15-27-4w, producing 75 bbls. at 1971 ft. Peerless Dev. Co., State 1, sw 16-27-3w, dr 1100 ft. Fulton Pete Corp., State. 2, nw 16-27-4w, dr 1200 ft. Texas-Pacific, Hirshberg 4, sw 14-27-4w, rig up. W. E. Rive, Copley 1, se 15-27-4w, rig W. E. Rice, State 1, ne 16-27-4w, dr 1700 ft. Continental Dev. Co., Gjullin 3, nw 15-27-4w, dr 100 ft. Continental Dev. Co., Wheeler 1, sw 14-27-4w, dr 600 ft. Calpet, Kingsbury 2, sw 15-27-4w, rig up. Calpet, Pondera Valley St Bank, ne 15-27-4w, rig up. Ohio Oil Co., Carlson 1, 12-26-1e, dr 300 ft.

TETON—Elkhorn O. & G. Co., ne 12-24-1e, sd 125 ft. "56" Pete Corp., Speer 1, ne 4-25-1e, producing 1557 ft. Mitchener et al, Willick 1, ne 18-24-1e, sd 1625 ft. C. L. Archer et al, 1, se 31-26-1e, dr 1470 ft. Haddock Oil Co., Speer 2, sw 5-25-1e, prod 1490 ft. Fulton Pete Corp., Hirshberg 1, ne 22-27-4w, locatoin.

COLORADO

BENT—Marland Oil Co., No. 1 Pipe Springs, se 27-29s-49w, dr 1600 ft.

JACKSON—Producers & Refiners, Hendershot 1, ne 2-26n-81w, dr 670 ft.

JEFFERSON—Wood et al, 1, 30-3s-69, stndg 3000 ft.

LAS ANIMAS—Reiter-Foster and Phillips Pete, 23-29n-56, dr 2705 ft. Alavier Pete Co., Branson 1, ne 3-35s-58e, ready to spud.

LA PLATA—Childers Dr & Pr Co., Dry Mesa 1, 29-32n-14w, dr 675 ft. Royal P & Ref Co., Red Mesa 1, 27-33n-12w, rig.

LINCOLN—Kelly Oil Co., State 1, nw 36-14s-57w, dr 700 ft.

MESA—Eureka Oil Co., No. 2 Holly, 24-1s-1e, sd 925 ft. Pee less Oil Co., Hoel 1, ne 23-8s-104, prep to deepen 2058 ft.

MORGAN—Badger Creek O & G Co., Kent 1, sw 2-2n-57w, dr 270 ft.

MONTROSE—Uncompahgre O & G Co., nw 27-50n-10, rig up.

MOFFAT—Reiter-Foster, State 1, 16-12-100, sd 2240 ft. Yarg P & R Co., 205, 26-4n-92w, wtg for 4¾-in. Alliance Oil Co., Milliken 1, 14-4n-92w, stndg cmtd 3310 ft. McCormick et al, Sales 1, se 28-4n-92w, 1810 ft.

RIO BLANCO — Texas Production Co., Freeman 1, 27-3-94, dr 5875 ft. Argo Oil Co., se 9-2s-96w, prep to spud, Union of Calif., U. S. Consol. 1, 10-2n-88w, dr 505 ft.

ROUTT—Great Western Oil Co., State 1, 17-60n-56w, stand. 2504 ft.

YUMA—Etnyre Synd., sw 7-2s-43, sd 900 ft.

NEW MEXICO

CHAVES—McQuigg Bros., Neis 1, 7-5s-29e, abdg 3515 ft. Snowden & McSweeney, Marchant 1, nw 27-15s-23e, dr 1400 ft. R. E. Neal et al, Russell 1, 21-14s-25e, sd 495 ft. Warman et al, 1, sw 23-13s-24e, wait for 12½-in. at 130 ft.

DeBACA—Matador Oil Co., State 1, sw 6-4n-20e, dr 514 ft. Navajo Oil Co., McAdoo 1, ne 16-1s-27e, td 4190 ft., waiting adjustments.

LEA—Midwest Ref Co., State 1, 9-19s-39e, td 4100 ft; Farnsworth 19, 12-26-37w, dr 2700 ft. Marland Prod Co., Eaves 1, 19-26-37, fsg for 2 strings tools at 3000 ft; Sholes 1, 19-25s-37e, show. 60 M gas at 3034 ft; Lynn 1, 26-23-36, spdg; King 1, ne 26-25s-32e, mvg in tools. Marland Prod Co., Brooks 1, sw 8-20s-33e, rig; Danciger 1, 7-23-36e, tools lost at 300 ft. Empire G & F Co., State 1, 8-21s-35e, swbg water 3828 ft. Gypsy Oil Co., State 1, 34-21s-36e, stand. 3072 ft, title trouble. Exploration Co., Record 1, ne 26-19s-35e, dr 4556 ft. Morton et al, State 1, ne 32-11s-38, wait for tools. Texas Prod Co., Sheppard 1, ne 6-26s-37e, rig up; Eagle 1, sw 9-26s-36e, rig; Moberly 1, se 17-26s-37e, mvg in. Bordages et al, Hughes 1, 27-19-18e, dr 3567 ft. Curtis Dr Co., Nixon 1, 22-18s-34e, stndg 475 ft. C. E. Reynolds Dr Co. An-

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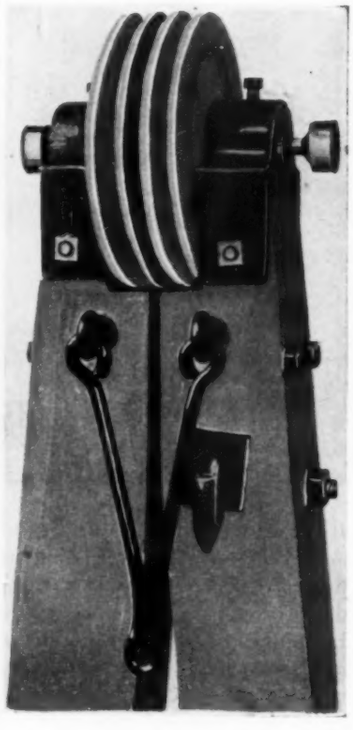

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derson 1, 29-13s-37e, dr 1710 ft. Cranfill & Reynolds, Wilson 1, ne 23-25s-36e, location. Cranfill & Reynolds, State 1, se 23-26s-36e, mvg in. Skelly Oil Co., 1, se 26-25s-36e, spdg 150 ft.

SAN JUAN—Continental Oil Co., Munoz 17, 2-29-19, bailer trouble 5778 ft. Huntington Park Oil Co., 29-30-9, gas escap with show of oil. Huerfano Oil Co., Wiltbank 1, 25-29-11, stndg 800 ft. San Juan Pete Co., 1, 9-29-13w, sd 2950 ft. Kirkland Dr Cr., Hunt 1, 10-29-15, td 205 ft., repairing. Kutz Canon O & G Co., Day 1, 29-28-11, td 270 ft. Midwest Refining Co., State 1, se 36-22n-14w, dr 775 ft. Blackrock Oil Co., 1, sw 11-25n-13w, dr 500 ft.

SAN MIGUEL—E. Adams et al, Deason 1, 14-15n-16e, sd 1235 ft. H. E. Hoover Co., sanguijuela, se 18-17n-17e, hole cav to run cas 1975 ft.

TORRANCE—Duran Dome Oil Co., 1, 31-2-14, sd 1600 ft. Bluhall O & G Co., 20-6n-10e, string to bottom, 1132 ft. Hall et al, Pinos Wells 1, sw 25-3n-13e, dr 450 ft.

VALENCIA—Acme Oil Co., N. M.-Ariz Land Co., 26-6-3, dr 2900 ft.

GUADALUPE—Navajo Oil Co., Goard 1, 10-3n-17e, td 2550 ft., resuming operations.

OKLAHOMA

WOODS COUNTY—T 26n, R 18w, Sec. 11, Geo. Vincent et al's Freedom 1, c sw, ponds.

HARPER COUNTY—T 27n, R 21w, Sec. 24, A. F. Kopisch Oil Co.'s Selman 1, nec se, spudded and sd.

WOODS COUNTY—T 27n, R 15w, Sec. 20, Sooner State Oil Co. & E. R. Black's Marcum 1, c sw, spudded and sd.

GRANT COUNTY—T 27n, R 5w, Sec. 18, J. W. Bailey's Custard 1, c se, ts 4835-60 ft, 800,000 gas, ts 4878-83 ft slight increase in gas, dr 4955 ft. T 26n, R 4w, Sec. 34, Sooner State Oil Co.'s Royce 1, swc nw, sd 550 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A. Vincent and National Union Oil Co.'s McNeal 1, nwc ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec. 14, Hoffer Oil Co.'s Cooper 1, nnwc es, sd 4182 ft, litigation.

GRANT COUNTY—T 25n, R 4ww, Sec. 22, Cowden's Vollner 2, nec se ne sw, lost tools 5640 ft, sd.

KAY COUNTY—T 25n, R 1w, Sec. 15, Tonkawa Dev. Co.'s McDaniels 1, sec, dr 4685 ft.

NOBLE COUNTY—T 24n, R 3e, Sec. 11, Geo. Miller et al's Howe 1, c nw se, ur 8-inch 1760 ft. T 20n, R 1w, Sec. 32, Marland Oil Co. et al's Kidd 1, nwc sw, Wilcox sand 5196-5200 ft, coring, true Wilcox 5283 ft, td 5290 ft, sd to plug.

TEXAS COUNTY—T 1n, R 18e, E. C. M., Sec. 11, Three Way Oil Co.'s Price 1, sec nw, sd 3490 ft.

WOODWARD COUNTY — T 24n, R 17w, Sec. 32, Otstot Dev. Co.'s Simmons 1, sec, sd 1500 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, sec nw, sd 4720 ft, will abn. T 24n, R 3w, Sec. 14, Fagar Oil Co.'s Garsarch 1, sec, plugged and abann 4767 ft. Sec. 24, Champlin & Marland's Stoner 1, owd, nwc se, plugged and aband 4185 ft.

ELLIS COUNTY—T 21n, R 25w, Sec. 9, Oklahoma Northern Oil Co.'s 1, c se nw, sd 300 ft.

WOODWARD COUNTY — T 21n, R 19w, Sec. 15, Burgoyne Bros.' 1, swc se ne, ur 10-inch at 1305 ft. T 21n, R 21w, Sec. 25, Sharon's Elmore 1, swc, rig blown down, td 2778 ft.

GARFIELD COUNTY—T 20n, R 4w, Sec. 9, Marland Oil Co.'s Looman 1, nec se, sd 5735 ft, csg parted. Sec. 12, Marland Oil Co.'s Miller 1, swc, sd 4586 ft.

DEWEY COUNTY—T 18n, R 15w, Sec. 9, Huckelby & McCoy's Perfect 1, nec, ur 5-inch 4365 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Haley & Consolidated Drilling Co.'s Quier 1, sec sw, run 5-inch csg past tools 3950 ft, fsh bailer 3945 ft. T 18n, R 2w, Sec. 21, Tibbets & Bond et al's Donohue 1, swc nw se, rig. T 17n, R 1e, Sec. 28, T. B. Slick's Berry 1, sw se, td 5730 ft, pb to 4700 ft.

KINGFISHER COUNTY — T 16n, R 7w, Sec. 6, Gault Brown Oil Co.'s Campbell 1, c nw se, sd 4516 ft. T 16n, R 6w, Sec. 27, Crawford & McKenna's Sturgeon 1, nec sw, sd 4509 ft.

BLAINE COUNTY—T 15n, R 12w, Sec. 26, W. J. Donley's Dickens 1, sec ne, ur 10-inch 1765 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec. 9. A. D. Spears' Piatt 1, swc ne, sd 3223 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec. 18, T. B. Slick & Bailey's Lufkin 1, c ne se, sd 4510 ft. T 12n, R 3w, Sec. 15, Cromwell et al's Thompson 1, swc ne ne, dr 6910 ft.

OKLAHOMA COUNTY—T 11n, R 3w, Sec. 24, I. T. I. O. Co.'s Park 1, c se se, est 25M gas 3996-4013 ft, dr 4280 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. M. V. Bailey's Robinson 1, c ne nw, spudded and sd.

OSAGE COUNTY—T 25n, R 6e, Sec. 25, Amerada's 1, ne cor sw, ur 12½-inch 1490 ft.

PAWNEE COUNTY—T 22n, R 5e, Sec. 33, Wahoma O. & G. Co.'s Buffalo 1, sec nw, sd 1490 ft.

PAYNE COUNTY—T 18n, R 3e, Sec. 32, Garber, Pulse & Gloyd's Widows 1, nec se nw, sd 1200 ft.

LINCOLN COUNTY—T 13n, R 4e, Sec. 16, Bu-Vi-Bar Pet.'s School Land 1, c ne sc, dr 4705 ft.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 31, Barnsdall's Tiger 1, swc ne, dr 3135 ft. T 11n, R 10e, Sec. 4, Moose & Daniels' Stidham 1, swc nw, sd 622 ft.

MUSKOGEE COUNTY—T 13n, R 17e, Sec. 34, Elk Drilling Co.'s McKee 1, csl se se se, sd 160 ft. T 13n, R 18e, Sec. 33, Haynie's Linder 1, c se, dr 2140 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, swc nw se, 3M gas at 1325-90 ft, 2M gas at 1890-95 ft, Bradenheaded Cromwell sand 3M gas 4472-4525 ft, dr 5529 ft.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nw ne sw, dr 2382 ft.

LATIMER COUNTY—T 5n, R 18e, Sec. 15, Limestone O. & G. Co.'s Murray 1, swc, dr 1800 ft.

POTTAWATOMIE COUNTY—T 10n, R 3e, Sec. 12, Sikes, Kilgore & Shaffer's Ives 1, c se se, fsh 5525 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 3, Superior's Davis 1, swc se, dr 4015 ft. T 10n, R 7e, Sec. 18, Shaffer et al's Jones 1, swc ne, td 4710 ft hfw, pb to Cromwell.

HUGHES COUNTY—T 9n, R 10e, Sec. 26,

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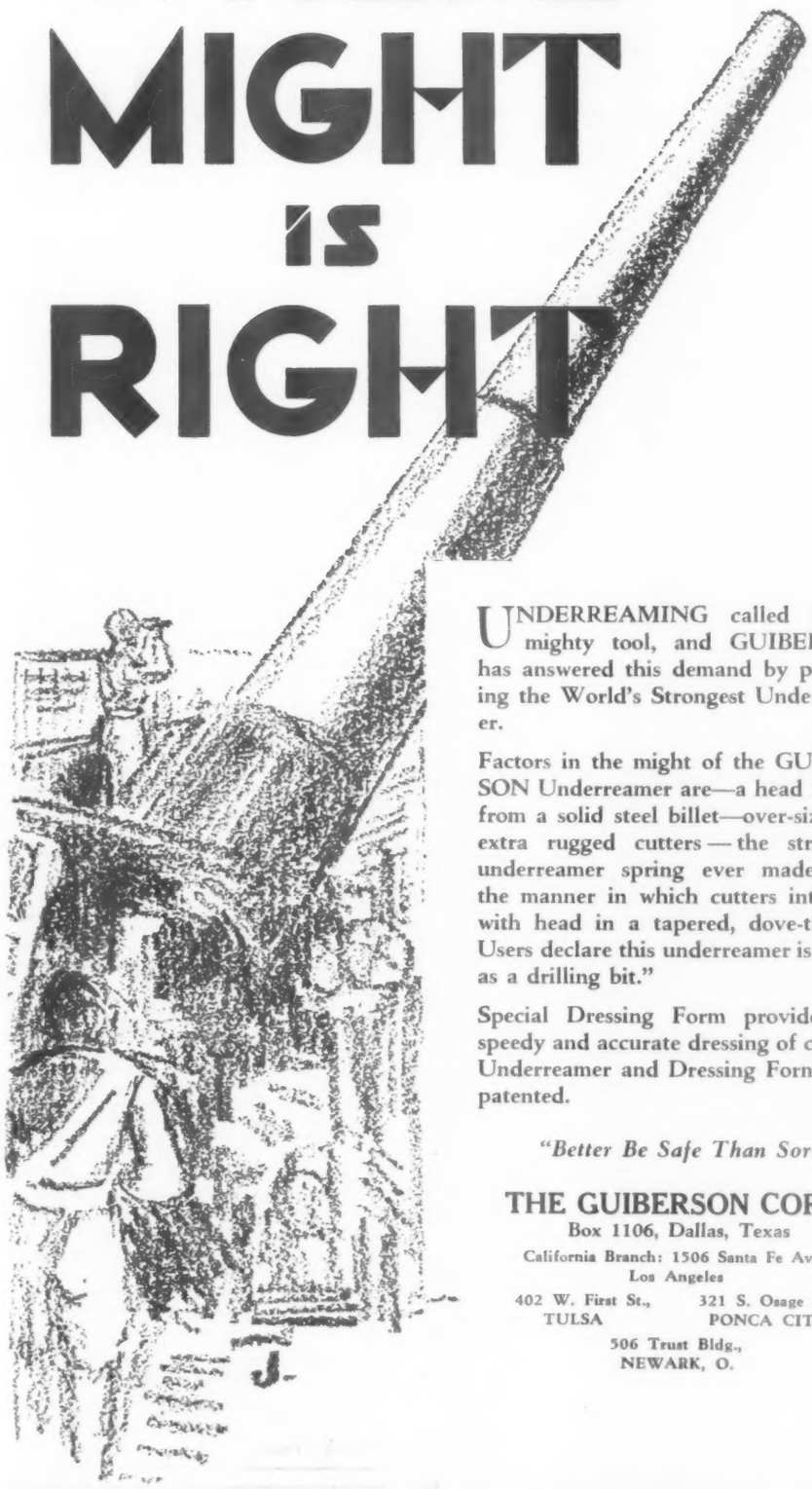

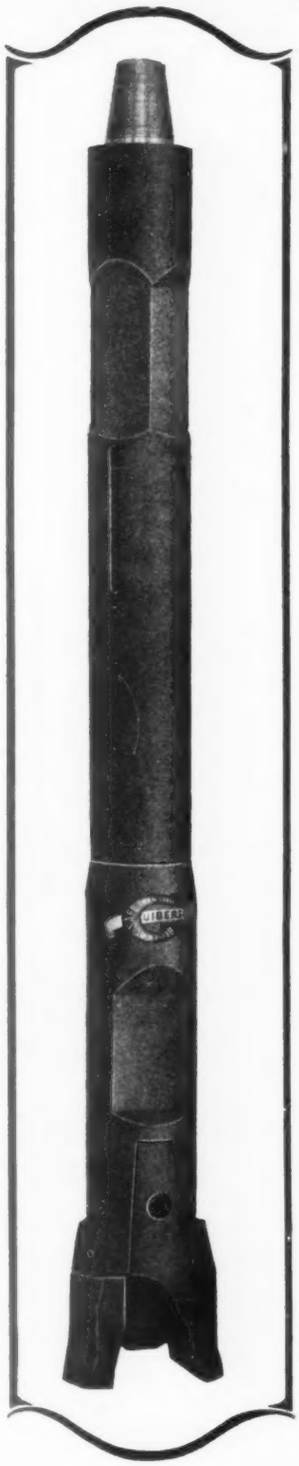

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Fuhrman Pet. Co.'s Buck 1, ne nw se, td 2584 ft, 12M gas, dry sand 3128-47 ft td, fsh.

POTTAWATOMIE COUNTY—T 8n, R 2e, Sec. 24, Superior's Jones 1, sw nw ne, fsh 4660 ft.

HUGHES COUNTY—T 8n, R 10e, Sec. 1, Bauer et al's Penn 1, nwc sw ne, td 2350 ft, collapsed 10-inch csg, sd.

CLEVELAND COUNTY—T 7n, R 1w, Sec. 15, Sooner Oil Co.'s Vandeveer 1, ne nw sw, 3120 ft, sd.

POTTAWATOMIE COUNTY—T 7n, R 2e, Sec. 17, T. B. Slick's Spangler 1, nw se nw nw, dr 4737 ft.

SEMINOLE COUNTY—T 7n, R 6e, Sec. 7, Simon and Beam's Palmer 1, ne nw ne, rig.

POTTAWATOMIE COUNTY—T 6n, R 5e, Sec. 16, T. B. Slick's School Land 1, sec, sand 4662-85 ft, td, hfw, sd. Sec. 20, Roxana's Deister 1, nwc se ne, dr 4013 ft hf sulphur wtr.

SEMINOLE COUNTY—T 6n, R 6e, Sec. 1, T. B. Slick's Moore 1, sw ne sw, sand 2870, td 2875 ft, hfw, pb to 2760-75 ft, pump 200 bbls water and 7 bbls oil. Sec. 10, Gypsy Oil Co. et al's Davis 1, se ne se, td 4150 ft, hfw sd. T 6n, R 7e, Sec. 4, Shaffer O. & R. Co.'s Carolina 1, se sw ne, dr 1975 ft.

HUGHES COUNTY— T 6n, R 8e, Sec. 32, T. B. Slick's Epperly 1, nw ne nw, dr 2395 ft. T 5n, R 9e, Sec. 17, E. W. Whitney's Huddleston 1, sec sw setting 10-inch at 1140 ft.

GARVIN COUNTY—T 4n, R 3e, Sec. 10, Garland Oil Co.'s Strickland 1, sw nw sw, dr 2825 ft.

PONTOTOC COUNTY—T 3n, R 8e, Sec. 10, Douglas' Johnson 1, c nw nw, cemtd 8-inch csg at 1990 ft, dr 2500 ft.

COAL COUNTY—T 2n, R 8e, Sec. 5, Wichtex Oil Co.'s Folsom 1, c nw nw, lcn.

MURRAY COUNTY—T 1n, R 2e, Sec. 17, Revels & McGee's Wolfe 1, nwc, sd 822 ft.

COAL COUNTY—T 1n, R 8e, Sec. 35, W. E. McGraw et al's Patten 1, sw se ne, sd 3510 ft. T 1n, R 9e, Sec. 24, Galbreath et al's Jones 1, swc se, spudded and sd.

CUSTER COUNTY—T 14n, R 14w, Sec. 1, W. E. Witt's 1, c sw, spudding.

CADDO COUNTY—T 12n, R 11w, Sec. 15, Abernathy & Ashton's 1, c nw, coring 3786 ft.

ROGER MILLS COUNTY—T 11n, R 26w, Sec. 4, L. G. Hivick's Davis 1, c nw ne, dr 100 ft.

BECKHAM COUNTY—T 9n, R 22w, Sec. 32, O. & H. Pet. Co.'s Barnes 1, owd, fsh 3430 ft.

KIOWA COUNTY—T 7n, R 15w, Sec. 35, David Malernee's Van Kirkland 1, nwc, sd 858 ft. T 6n, R 15w, Johnson's McDowell 1, c sw ne, dr 1875 ft.

CADDO COUNTY—T 6n, R 12w, Sec. 29, W. J. Hartley's Gilbreath 1, sec nw se, owdd, sd 3395 ft.

KIOWA COUNTY—T 5n, R 14w, Sec. 17, Blue Mt. Oil Co.'s Jones 1, sec nw nw, sd 625 ft.

GRADY COUNTY—T 3n, R 7w, Sec. 8, David Malernee's Brown 1, se nw sw, dr 2850 ft.

STEPHENS COUNTY—T 2n, R 5w, Sec. 20, Smythe & Martin's Vestal 1, c ne se, dr 1171 ft.

COMANCHE COUNTY—T 1n, R 12w, Sec. 14, P. Hrbacek & A. E. Korthaus' Wilson 1, c ne sw, owd, dr 3445 ft.

JACKSON COUNTY—T 1s, R 20w, Sec. 33, Stanley-McGregor's 1, sw nw sw, sd 1800 ft.

TILLMAN COUNTY—T 1s, R 15w, Sec. 9, Bray et al's Barker 1, c se nw, sd 850 ft.

STEPHENS COUNTY—T 1s, R 6w, Sec. 16, Insligs & Russell's Perry 1, nec sw nw, sand 1148-55 ft, small show gas, dr 1525 ft.

TILLMAN COUNTY—T 2s, R 17w, Sec. 23, A. J. Bundy's Hayter 1, cnl s½ se, sd 590 ft.

KIOWA COUNTY—T 2s, R 16w, Sec. 6, Landfair et al's 1, sec sw se, sd 2464 ft.

COTTON COUNTY—T 4s, R 12w, Sec. 16, Guiler & Pyson's Thomas 1, sec sw, spudded and sd.

TILLMAN COUNTY—T 5s, R 13w, Sec 11, Everts et al's Indian 1, sw nw ne, dry and abn 2318 ft td.

JEFFERSON COUNTY—T 5s, R 8w, Sec. 28, Amerada's Emerson 1, nw se sw, dr 3215 ft.

JOHNSON COUNTY—T 1s, R 7e, Sec. 29, Smity-Kinsley's Lane 1, sec nw, sd 490 ft. T 4s, R 4e, Sec. 18, Wirt Franklin Pet. Corp.'s Wilkes 1, swc se, dr 3365 ft.

MARSHALL COUNTY—T 4s, R 4e, Sec. 35, Wirt Franklin Pet. Corp.'s Foster 1, sec sw sw nw, dry and abnd, td 1375 ft.

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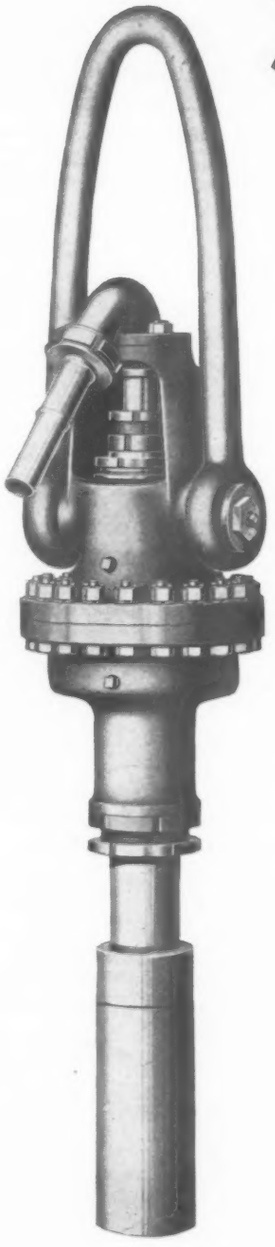

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Extra Heavy Type for use with 8-inch Drill Pipe or Extra Long Strings of 6-inch Drill Pipe .

6-INCH TYPE "H"

Designed for Bearings with Inclined Rollers, otherwise the same as Type "HS"

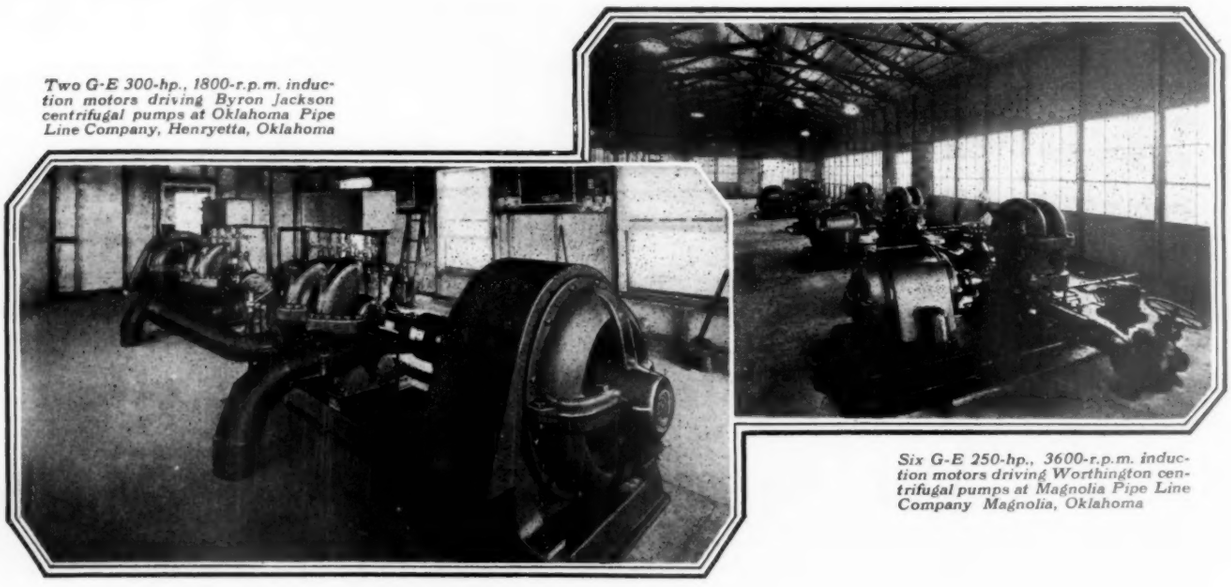
3-INCH TYPE "K"

For Prospecting Work where 3-inch or smaller Drill Pipe is used

DESCRIPTIVE BULLETIN No. 30U ON REQUEST

THE NATIONAL SUPPLY COMPANIES

Say you saw it in The OIL WEEKLY



Two G-E 300-hp., 1800-r.p.m. induction motors driving Byron Jackson centrifugal pumps at Oklahoma Pipe Line Company, Henryetta, Oklahoma

Six G-E 250-hp., 3600-r.p.m. induction motors driving Worthington centrifugal pumps at Magnolia Pipe Line Company Magnolia, Oklahoma

Move your oil electrically

Figure it all out—initial cost, installation cost, housing, man-power, depreciation, power cost. Then think of reliability, flexibility, salvage value, elimination of water lines, ***availability when oil must be moved.*** Then you'll discover how superior electric power for pipe lines really is.

Consider the "booster". Why "lay a loop" when G-E equipped pumps can be so promptly obtained, easily transported, and quickly installed?

Investigate G-E Motorized Power for pipe-line pumping. It has an enviable reputation for performance and all-round efficiency in every application in the oil industry. Your nearest G-E office is ready to supply complete information as to the proper selection of motors and control.

General Electric supplies complete electric equipment to the oil industry. With warehouse facilities close to your operations, G.E. readily furnishes motors, controllers, transformers, arresters and other protective devices, capacitors for power-factor improvement, switching equipment, etc.

G-E oil fieldspecialists at: Dallas, Denver, Houston, Kansas City, Oklahoma City, Tulsa, Los Angeles, San Francisco.

Apply the proper G-E motor and the correct G-E controller to a specific task, following the recommendations of G-E specialists in electric drive, and you have G-E Motorized Power.

Motorized Power
—fitted to every need

200-160H

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN PRINCIPAL CITIES

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Explosion-Proof Motor

THE LOUIS ALLIS COMPANY

The Louis Allis Company, Milwaukee, Wisconsin, announces a self-ventilated, explosion-proof motor to be known as type Ex. It was developed to meet the need for a motor that would be small and light enough for practical use, and would also be explosion-proof.

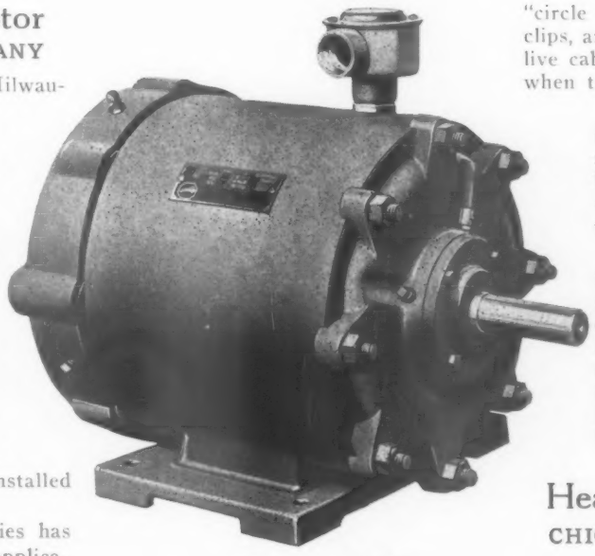
The motor is said to be about half the weight of the non-ventilated type, but is slightly heavier than a standard open motor. A five horsepower, 1750 r.p.m type Ex motor, for instance, is only 38 pounds heavier than an open motor of the same rating and can be installed in the same space.

The Underwriters' Laboratories has approved the new motor for applications involving inflammable liquids equally or less hazardous than gasoline, naphtha, acetone and alcohol.

The motor can be mounted without special arrangements on a machine designed for a standard open type motor.

Sizes up to five horsepower are available now and a 10 horsepower type is to be announced soon.

More complete information may be secured upon application to the company.



Explosion Proof Motor

New Cable Clip

EUREKA METAL PRODUCTS CORPORATION

A cable clip with large holding surface has been put into production, in a full range of sizes, by the Eureka Metal Products Corporation of North East, Pennsylvania.

The construction of this clip is rugged, and it has only four parts. The Eureka clip's extra grooved jaw is peened to the "U".

The Eureka Clip, according to the manufacturers, gives triple safety because of its triple grip upon the cable.

Any size wrench can be used to tighten up the Eureka Clip. There is no chance whatever of injury to the cable, regardless of the size wrench that is used—no restriction on the length of wrench handle is necessary. This clip's double grooved surface prevents any distortion of the cable, no matter how tight the nuts are pulled down.

And there is no restriction on the way in which these clips are placed on the cable—it doesn't matter which way the U-bolt is turned. The clips can be staggered on the cable, or placed with the U-bolts all the same direction, and it makes no difference. There are no "circle bends" in the cable from the clips, and the U can be placed over the live cable with just as good results as when turned the other way.

The double grooved surface forms a perfect loop—perfectly symmetrical, with equal flexibility on both sides. The stresses on the cable are equalized under heavy loads.

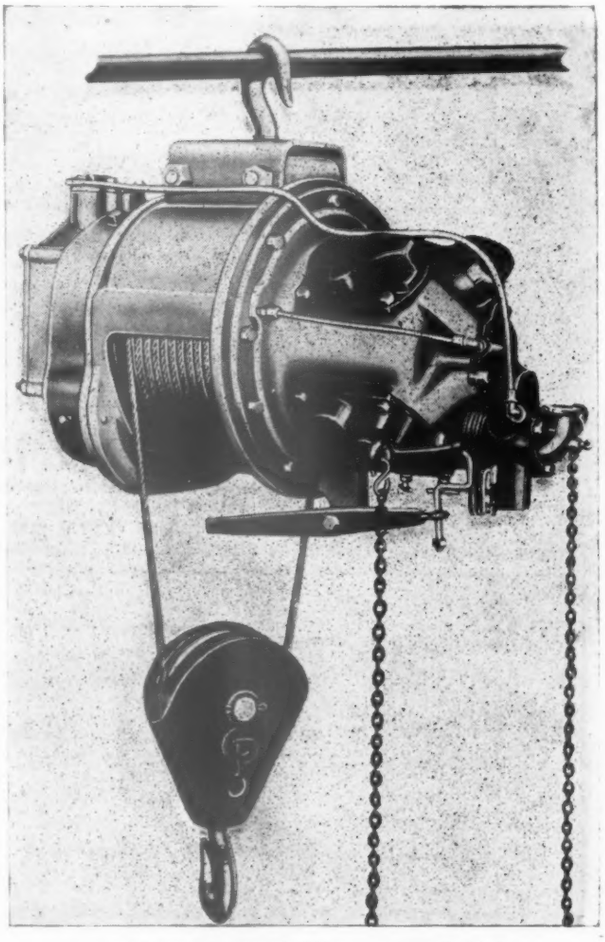
These patented clips are made in all sizes, of steel or bronze, and are sold by the manufacturer with an absolute guarantee of satisfaction to the user. A descriptive folder can be obtained by writing the Eureka Metal Products Corporation, North East, Pennsylvania.

Eureka Cable Clip

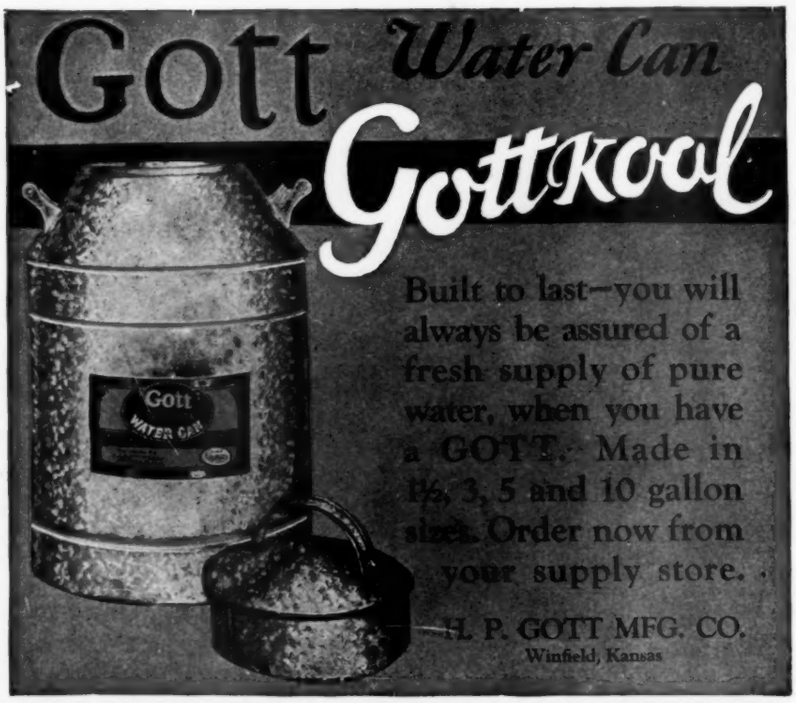
Heavy-Duty Air Hoists

CHICAGO PNEUMATIC TOOL COMPANY

Chicago Pneumatic Tool Company, 6 East 44th Street, New York, announces a line of CP air Hoists embodying several new features. The three sizes now available have a capacity of 2000, 3000



Chicago Pneumatic Heavy Duty Air Hoist.


Gott Water Can
Gottkool
Built to last—you will always be assured of a fresh supply of pure water, when you have a GOTT. Made in 1½, 3, 5 and 10 gallon sizes. Order now from your supply store.
H. P. GOTT MFG. CO.
Winfield, Kansas

BUY OR RENT USED PIPE

and Save the Difference

We have the following pipe in the Panhandle District that was purchased new and used in one well:

3600′ 6⅝″ 24-lb. seamless casing.	1200′ 12½″ 50-lb. casing.
200′ 20″ 90-lb. casing.	2000′ 10″ 45-lb. casing.
500′ 15½″ 70-lb. casing.	2800′ 8¼″ 32-lb. casing.

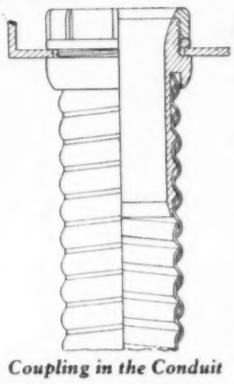
Will rent this casing or any other pipe which you may need. Let us finance your operations by carrying your pipe and casing investment for you.

BRANCH STORES
Wichita Falls, Holliday, Vernon, Breckenridge, Texas

EASTERN HEADQUARTERS
Butler, Penna.

Keystone Pipe & Supply Co.

HOLMES BUILDING
FORT WORTH, TEXAS



Coupling in the Conduit

Flexible Conduit Connections should be

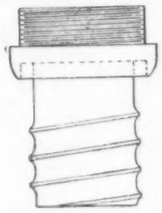
"JAKE"

Cast in Brass in sizes ½ to 2 inches

Also

Adapters for present Installation

Write for details if your dealer can't supply you



Coupling

Hunter-Walker Company

809-813 Public Nat'l Bank Bldg., HOUSTON, TEXAS

and 4000 pounds respectively and have an enclosed type load block. The motor is four cylinder, single acting and practically vibrationless. Being unusually compact, these hoists require minimum head room. A balanced type control valve assures smooth and positive control. The lifting speed has been considerably increased; for example, the 1-ton size will lift 2000 pounds at a speed of 40 feet per minute. Other features include Case Hardened Steel Reduction Gears, Crank-Shaft that runs on large size ball races, Brake Drum lined with Johns-Manville Asbestos Brake Lining and Alemite Lubrication. Special publication No. 1669 will gladly be sent to those writing the manufacturers at the above address.

Electric Steel Foundry at Houston

W. H. Hogue with his associates have announced the installation of the Vulcan Electric Steel Foundry, Inc., located at 2150 Dumble Street, Houston.

The company is capitalized at $50,000 and the officers and directors list the following South Texas business men: W. H. Hogue, president; F. G. Sowden, vice-president; C. J. Weber, secretary-treasurer; Irl F. Kennerly, attorney; Gene Corbett, president Harrisburg Pipe and Pipe Bending Company of Texas; C. H. Neblett, R. B. Everett & Company; W. H. Gemmer, Gemmer and Tanner.

Mr. Hogue has had wide experience in the organization and direction of business. Mr. Sowden is thoroughly equipped to look after the foundry operation, due to long experience in electric steel casting.

They will make special provisions to take care of the steel casting requirements of oil field equipment manufacturers and the oil companies.

Tulsa.—Oklahoma Natural Gas Corporation moved last week into its new 10-story office building at Seventh Street and Boston Avenue. Construction of its own building followed its great expansion of several months ago when the gas properties of the Oklahoma Gas & Electric Company were acquired. The company now buys gas from about 35 producing areas in the state and serves more than 50 cities with natural gas through 1400 miles of pipe line system.

Tulsa.—Imperial Royalties Company of Tulsa, established in April, 1920, paid its monthly dividend of 1½ per cent on its $1.00 par preferred shares on July 30. This dividend, No. 94, makes a total of 161½ per cent paid to preferred shareholders. Also the usual monthly dividend of 15 cents a share was paid on its Class A preferred shares on July 30.

BARSCO

Forged Steel

Braden Heads

Here's another BARSCO Product that, because of its more modern superior design and *forged steel* (can't break) construction, renders a *longer service—more economical* because fewer replacements—approximately *lessc than one-half of the weight* of the ordinary cast iron head.

The *forged steel* from which the head is made has a carbon content of from 50 to 60 points and tensile strength of from 90,000 to 110,000 pounds. Will stand up under the most severe service—*no danger of breakage.*

For working pressures up to 4000 pounds

"BARSCO" Forged Steel Braden Heads are provided with an inner thread into which a short piece of casing is screwed. The head is then lowered into position below the derrick floor and set up. Outlets are threaded for 2-inch or 3-inch pipe. These heads are furnished with rubber rings for packing and a split steel ring which can be removed, allowing the couplings to be pulled through head without breaking any connections. Furnished with either solid or split Stuffing Box.

Prices and weights furnished upon application.

BARTLESVILLE SUPPLY CO. of Missouri
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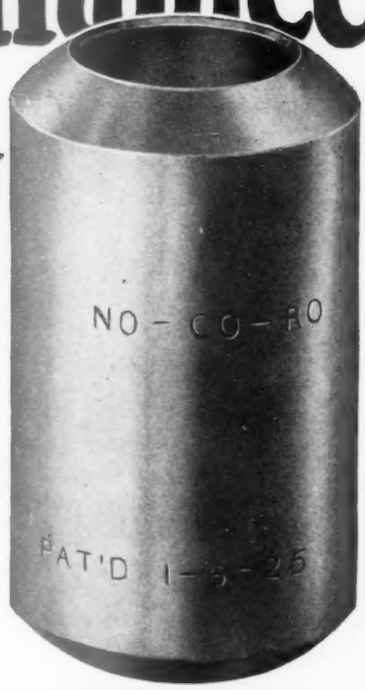
BARSCO PRODUCTS
for oil and gas well drilling. Drive Shoes—Casing Shoes—Die Nipples—Rotary Tool Joints—Braden Heads—Rubber Swabs—Gas Packing Clamps—Anchor and Tubing Clamps—Stop Cocks. Write for complete catalog.

our guarantee

simply stated is this



You pay for the NO-CO-RO Drop & Seat only if it outlasts and outperforms the two best *balls* and seats you have ever used.

And here are three reasons why even so specific and liberal a guarantee is a safe one for us to make:

(1) No producer has ever used the Drop & Seat without placing repeat orders.

(2) A Kansas user, whose name we will gladly give you, gets 36 months' service in a well in which balls and seats were changed each month.

(3) On the Margaret J. Maxwell lease, where no ball and seat would give even a months' service, Drops & Seats gave 18 months' service and were still operating 24 hours a day at the time the report was written.

The Norris guarantee is specific, clearly worded and backed by 22 years of fair dealing. It promises, without risk on your part, a definite and substantial reduction in pulling and valve replacement costs. The next move is yours.

NORRIS BROTHERS, Inc.
Robinson, Illinois Fort Worth, Texas

ONLY casing of outstanding quality can safely meet the requirements of modern deep drilling practice.

—casing like " Astco" Seamless Steel Oil Country Tubular Products, fabricated from the best material produced anywhere on earth.

—fabricated by the Mannesmann-Pilger processes which insures that this steel will retain all of its original strength —without seams or welds to weaken or collapse.

With all its high-quality and super - strength, "A S T C O" will prove most economical eventually.

American Seamless Tube Corporation

1211 Neils Esperson Bldg.
Houston, Texas

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New York City

Petroleum Securities Bldg.,
Los Angeles, Calif.

STRENGTH RESISTANCE A S T C O DURABILITY

Trade Mark Reg.

"ASTCO"
Seamless
STEEL CASING

SQUEAKS FROM THE BULL WHEEL

New Scotch song: "Let the Rest of the World Go Buy."

Generous Uncle: "Have you got a dime bank, Willie?"
Wise Willie: "Nope, but I got a bill fold."

Work faithfully for eight hours a day and don't worry; then in time you may become the boss and work 12 hours a day and have all the worry.

We now hear of an old Scotchman who amused himself for an afternoon throwing pennies to the kids—and then died of heart failure when the string broke.

Silas: "There goes Hi Smith. Hi ain't the man he used to be."
Zeke: "No, and gol darn him, he never was."

"I shall never marry," Reginald declared, "until I meet a woman who is my direct opposite."
"Well, Reggie," said Mable, "there are a number of intelligent girls in this neighborhood."

"Could you give a poor fellow a bite?" asked the dust-stained tramp.
"I don't bite myself," answered the lady of the house, "but I'll call the dog."

"Do you see much of your husband?"
"About an hour each day."
"Oh! What a shame, dear."
"It's all right, darling. An hour soon goes."

"Any installments due today?"
"No, dear, I think not."
"Any payments due on the house, the radio, the furniture, the rugs, or the books?"
"No."
"Then I have ten dollars we don't need. What do you say if we buy a new car?"

A doctor had been to see one of his patients, a widow.
"You are worried slightly morbid, my dear lady," he said. "You should look about you and marry again."
"Oh, doctor," she answered coyly, "is this a proposal?"
"Allow me to remind you, madam," came the reply, "that a doctor prescribes medicine, but he doesn't take it."

"Why, Sam, you don't mean to tell me you've taken up begging?"
Sam: "Yessah, boss, Ah ain't got no other way to git along."
"Why, you told me once that you had a business."
"Yassah, Ah did have a business—a one-hand laundry, but Ah done lost my business."
"How did you come to lose it, Sam?"
"Well, suh, de way it was, she just up and divo-ced me."

"Why didn't you send your man to mend my electric bell?"
"I did, madame, but as he rang three times and got no answer, my man decided there was nobody home."

Anxious Wife: "Abie, have you done anything about that Black Hand letter?"
Abie: "Oh, ain't I, though. I turned it over to my insurance company. They got $20,000 tied up in me; let them worry."

Rastus: "Whatsa matter, Mose? Is dem feets of yours still paining you?"
Mose: "Yea, them still is shuh sore. Ise taken six cans of corn syrup—but it don' do no good."

"Have you ever spoken before a large crowd?"
"Sure, I have."
"What did you say?"
"Not guilty."

Proprietor (to head clerk): "Jones, put a pair of shoes on that plump dame if you have to use force!"
Jones: "That's the heck of it! She won't have anything larger than a three."

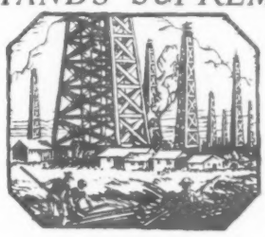
An optimistic Colorado farmer, on seeing some clouds floating by, remarked: "Well, I guess we're going to have some rain."
"Aw," said his pessimistic neighbor, an ex-railway man, "those are just empties coming back from Iowa!"

St. Peter scanned the tally that had been kept on the latest applicant.
"I can hardly let you into heaven on this record," he said. "Just what was your occupation on earth?"
"I was a truck driver," returned the disembodied soul.
"Open the gates, boys! He must have the right of way."

"He drove straight to his goal," fervently spoke the orator. "He looked neither to the right nor to the left, but pressed forward, moved by a definite purpose. Neither friend nor foe could delay him nor turn him from his course. All who crossed his path did so at their own peril. What would you call such a man?" He paused for effect. "A truck driver," came a knowing voice from the rear.

Once a city man out of work had "hired out" to a farmer. At 4 o'clock in the morning the newly employed hired man was called to breakfast. A few minutes later the old farmer was astonished to see the man walking off down the road.
"Say! Come back and eat breakfast 'fore you go to work!" he yelled after him.
"I ain't going to work," the man called back. "I'm going to find a place where I can stay all night."

ASCO STEEL
STANDS SUPREME



Every step in the production of Asco Steel is watched closely. From the selection of the raw materials to the finished product, the first thought always is to produce a steel that will give the best results to the makers of Oil Well Tools. Can we help you to produce better tools?

DISTRICT OFFICES:
503 Phil Tower Bldg., Tulsa, Okla.
541 McCormick Bldg., Chicago, Ill.

THE ANDREWS STEEL CO
NEWPORT KENTUCKY

For Strength and Uniformity Use

Murray Tool & Supply Co., Tulsa, Oklahoma — T. T. Word Supply Co., Houston, Texas — A. F. Keck & Co., Butler, Pa.
Wickwire Spencer Sales Co., 1310 The Philtower, Tulsa, Okla.

WICKWIRE SPENCER STEEL COMPANY
1310 The Philtower, Tulsa, Okla.

WICKWIRE SPENCER UNIFORM WIRE ROPE
tests better than A. P. I. specifications

$2,000,000
to make the
McALPIN
New York's Finest
HOTEL!

INSIDE and out, the famous McAlpin is enjoying complete restoration. Look over these outstanding features of the $2,000,000 improvement plan:

NEW carpets—NEW draperies and furniture throughout—NEW modern decorations and lighting effects—11 high-speed, self-leveling elevators—every room with bath.

All improvements are being executed without interruption of service . . . you are invited to inspect the exceptional accommodations the McAlpin now offers—bright, cheerful, spacious rooms of immaculate cleanliness—with prompt, courteous, efficient service to enthuse the most critical guest.

FRANK A. DUGGAN, *President and Managing Director*

HOTEL
McALPIN
ONE BLOCK *from* PENNSYLANIA STATION
B'WAY at 34th ST.

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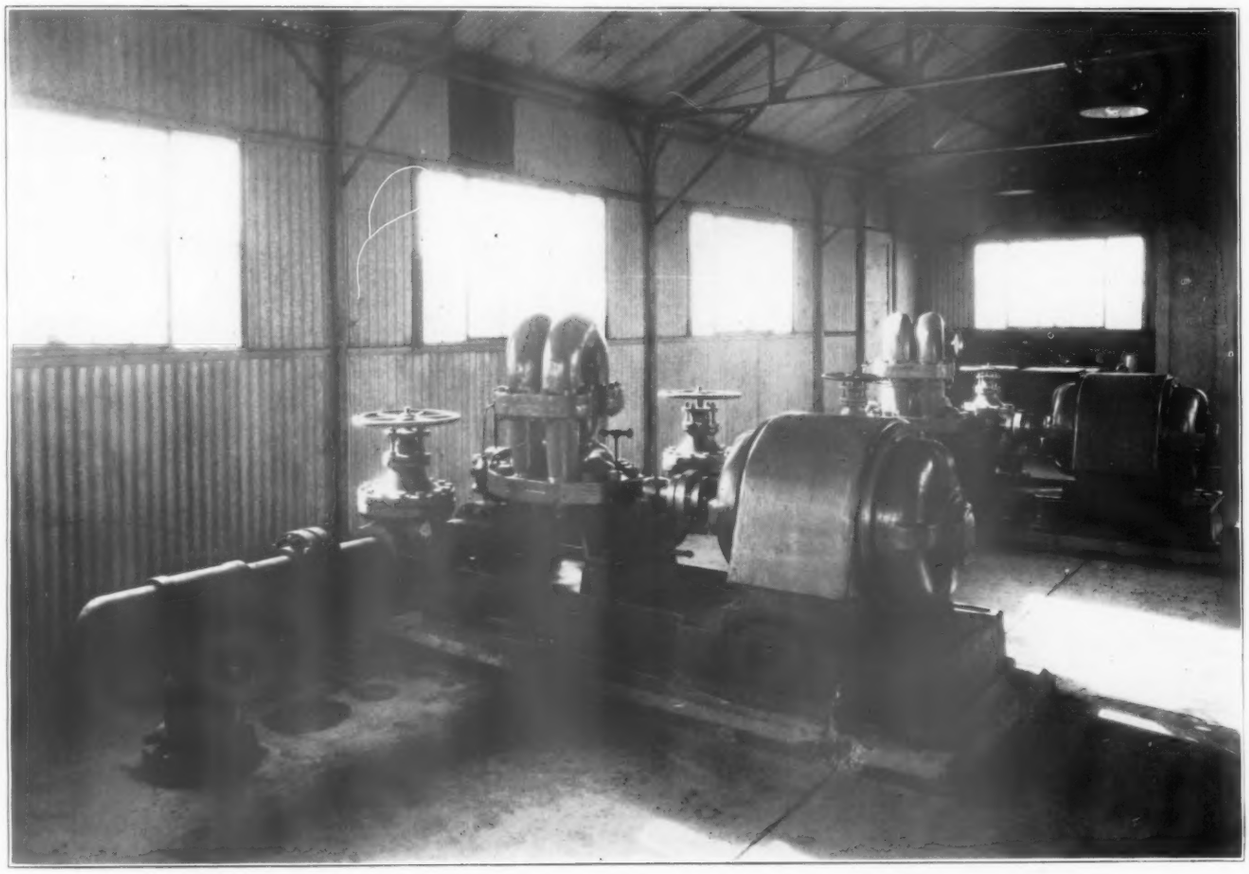
CENTRIFUGAL PIPE LINE PUMPING WITH ELECTRIC POWER MEANS LOW COST



A typical electrically driven centrifugal pipe line pumping station in West Texas. Two 250 horsepower, 3600 R. P. M. Motors driving centrifugal pumps.

OIL companies have found many advantages of electrical centrifugal pipe line pumping. Among the most important are the low first cost of stations, automatic control of long pipe lines, and completely automatic operation of booster stations. These advantages are possible only with electrically driven centrifugal pumps.

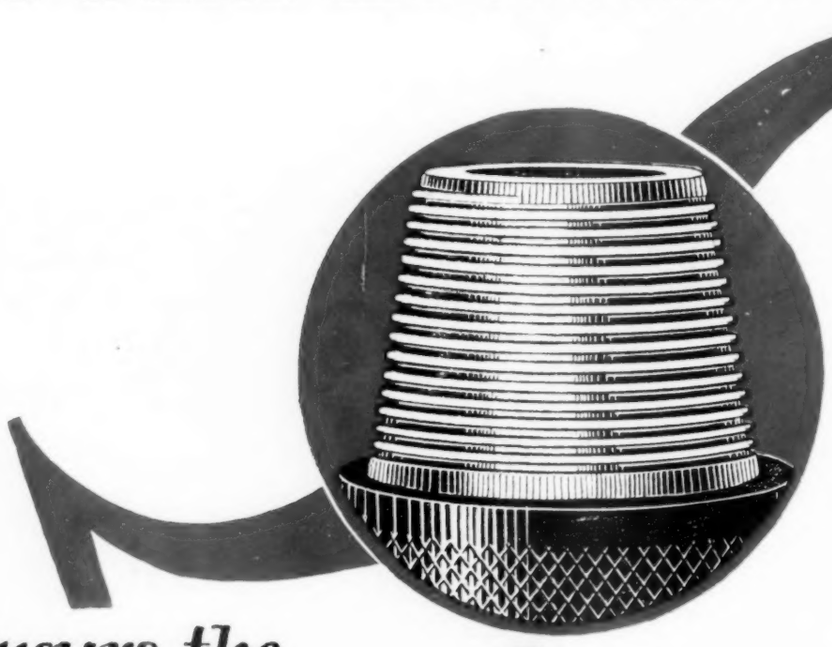
TEXAS ELECTRIC SERVICE CO.

General Offices

INTERURBAN BLDG., DALLAS, TEXAS

"MATERIAL + WORKMANSHIP"

(BY TUCKER)



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HUGHES TOOL JOINTS

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Many highly organized purchasers now specify the analysis of Steel desired in their Tool joints.

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And if you do

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